Ontario. Dept. of Lands and Forests
Annual Report 1966-67

DEPARTMENT OF LANDS AND FORESTS

ANNUAL REPORT

OF THE MINISTER OF LANDS AND FORESTS
OF THE PROVINCE OF ONTARIO
FOR THE FISCAL YEAR ENDING MARCH 31, 1967

DEPARTMENT OF LANDS AND FORESTS

THE DETAILED

ANNUAL REPORT

OF THE MINISTER OF LANDS AND FORESTS
OF THE PROVINCE OF ONTARIO
FOR THE FISCAL YEAR ENDING MARCH 31, 1967

TO HIS HONOUR,
The Lieutenant-Governor
of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR

The undersigned begs respectfully to present to your Honour, the Annual Report of the Department of Lands and Forests for the fiscal year beginning April 1st, 1966, and ending March 31, 1967.

Rene Brunelle

RENE BRUNELLE
Minister

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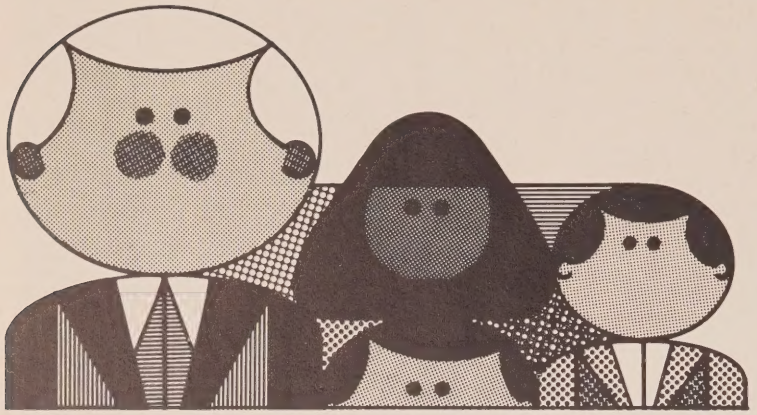
PERSONNEL BRANCH



OBJECTIVES

1. To provide adequate, competent staff for the Department.
2. To encourage good job performance through a career concept based on promotion, in service academic and technical training and up-to-date position classification.

ORGANIZATION

Personnel Branch is divided into five sections with duties and responsibilities as follows.

Employment: Recruitment of staff, including Junior Forest Rangers; recruiting activities at universities and technical schools; job advertising; transfers and promotions; establishment and complement control.

Classification and Job Evaluation: Identification of positions; analyses recommendations of classes; preparation of position specifications and organization charts; salary surveys; and assignment of qualified employees to positions.

Training and Special Assignments: Department training courses; arranging for employees to attend courses given by outside agencies; liaison with Ontario Forest Technical School and Educational Leave Committee; processing of employee grievances; special assignments.

Employee Relations: Counselling of employees; improvement of communications between field and head office staffs; investigations of problems relating to personnel; liaison with Staff Relations Branch, Treasury Board and Civil Service Association of Ontario.

Office Management: Personnel and attendance reports; leave of absence recommendations; processing of nominations; separations; group insurance; merit increases; accelerated increases and salary revisions.

TRAINING

Some 86 students graduated from the Ontario Forest Technical School Diploma Course in 1966. Of these, 81 had applied independently; one was sponsored by the Indian Affairs Branch of the Department of Citizenship and Immigration, Ottawa; one was sponsored by the External Aid Office, Ottawa; and three were sponsored by the Ontario Department of Lands and Forests.

A total of 151 students were enrolled for the 1967 Diploma Course, still in progress. Of these, 146 applied independently; four were sponsored by Department of Lands and Forests; and one by the Indian Affairs Branch, Ottawa.

Other courses given at the Ontario Forest Technical School were as follows:

COURSE	STUDENTS
Deer and Moose Aging (13)	194
Fire Investigation	37
Fire Suppression (8)	90
Fish and Wildlife Certificate	25
Fish and Wildlife Enforcement Training	30
Photo Interpretation	11
Scaling (3)	135
Supervisory Course for Chief Rangers	59
Timber Certificate	26

GRIEVANCES

A total of 34 employee grievances were submitted during the fiscal year. Of these, 15 were resolved by the Department or withdrawn, nine were still outstanding, five were heard by the Classification Rating Committee (three upheld and two dismissed) and five by the Public Service Grievance Board (all five dismissed). Some 26 of these grievances were concerned with classification, and eight with working conditions and terms of employment.

RECRUITMENT

The recruitment program for foresters, biologists, forestry technicians and conservation officers covered 16 universities and four ranger schools, together with job advertising in printed media across Canada. The response has been gratifying as a number of foresters, biologists, and forestry technicians have joined the full-time staff.

Summer work projects in forestry and biology were staffed with university and ranger school undergraduates in related courses. This provided career minded students with an opportunity to become acquainted with the Department's work programs, and gain useful experience.

Information concerning salaries, job opportunities and the Province of Ontario was sent to an additional 27 ranger and forest technical schools in Canada, United States, Scandinavian countries and France in an attempt to publish current career opportunities.

DISPOSITION OF PERSONNEL

F. MacDougall retired on June 16, 1966 after 25 years as Deputy Minister of the Department of Lands and Forests. He was succeeded by G. H. U. Bayly, who had served as Assistant Deputy Minister since 1957.

G. H. Ferguson, Q.C., was appointed Chief, Law Branch, on July 28, 1966 after serving as Supervisor since December, 1957.

P. Addison was appointed Chief, Parks Branch, on January 1, 1967.

A. J. Herridge was appointed Director, North-Eastern Region, on January 1, 1967.

J. M. Taylor was appointed Chief, Personnel Branch, on January 1, 1967.

D. R. Wilson was appointed Director, Southern Region, on January 1, 1967.

The disposition of senior administrative staff as of March 31, 1967 was as follows:

Assistant Deputy Minister: R. D. K. Acheson.

Regional Directors: A. J. Herridge (North-Eastern); L. Ringham (North-Western); D. R. Wilson (Southern).

Regional Forester: T. W. Hueston.

Branch Chiefs: P. Addison (Parks); Dr. C. H. D. Clarke (Fish and Wildlife); R. G. Code (Lands and Surveys); G. H. Ferguson, Q.C. (Law); A. P. Leslie (Research); R. R. MacBean (Accounts); M. B. Morison (Timber); P. O. Rhynas (Operations); J. M. Taylor (Personnel); J. M. Whalen (Forest Protection).

District Foresters: M. A. Adamson (Parry Sound); J. S. Ball (Sault Ste. Marie); R. A. Balkwill (Fort Frances); R. A. Baxter (Sioux Lookout); W. H. Charlton (Kenora); W. B. M. Clarke (North Bay); I. B. Earl (Gogama); L. H. Eckel (Cochrane); D. A. Fawcett (Kapuskasing); D. E. Gage (Geraldton); F. L. Hall (Lake Huron); G. A. Hamilton (Sudbury); J. D. Hughes (Swastika); J. R. Keddie (Chapleau); A. W. Leman (Lake Simcoe); J. W. Lockwood (Lake Erie); G. A. McCormack (White River); N. D. Patrick (Tweed); F. E. Sider (Pembroke); W. L. Sleeman (Port Arthur); W. A. G. Thurston (Kemptville); A. E. Walroth (Lindsay).

Ontario Forest Technical School Director: Q. F. Hess.

Table 1
TOTAL STAFF AS OF MARCH 31, 1967

	Regular	Probationary	Unclassified Staff	Total
Head Office	581	94	55	730
Field	1,689	203	722	2,614
	2,270	297	777	3,344
Total complement of regular and probationary positions as at March 31, 1967				3,021
Total regular and probationary staff as at March 31, 1967				2,567
Total vacancies in complement as at March 31, 1967				454

Table 2
NUMBER OF PROFESSIONAL EMPLOYEES ON STAFF AS AT MARCH 31, 1967

Foresters	Biologists	Civil Engineers	Miscellaneous	Total
235	80	7	55	377
Number of Ontario Forest Ranger School Graduates on Staff as at March 31, 1967				1,217
Number of Licensed Scalers on staff as at March 31, 1967				835

Table 3
TOTAL NUMBER OF EMPLOYEES ON STAFF FOR EACH MONTH OF THE 1966-67 FISCAL YEAR

	HEAD OFFICE				FIELD				
1966	Reg.	Prob.	Unclass.	Total	Reg.	Prob.	Unclass.	Total	Grand Total
April	589	60	43	692	1,702	159	1,709	3,570	4,262
May	584	66	61	711	1,718	139	3,286	5,143	5,854
June	605	61	97	763	1,701	126	3,803	5,630	6,393
July	586	69	95	750	1,711	134	4,214	6,059	6,809
Aug.	588	78	99	765	1,702	140	4,474	6,316	7,081
Sept.	587	79	64	730	1,696	144	3,232	5,072	5,802
Oct.	588	80	53	721	1,690	148	2,162	4,000	4,721
Nov.	587	83	25	695	1,691	153	1,363	3,207	3,902
Dec.	586	83	26	695	1,677	162	1,027	2,866	3,561
1967									
Jan.	591	90	59	740	1,670	162	931	2,763	3,503
Feb.	592	91	62	745	1,677	182	768	2,627	3,372
Mar.	581	94	55	730	1,689	203	722	2,614	3,344
Average	589	77	62	728	1,694	154	2,307	4,155	4,883

Table 4
STAFF TURNOVER OF REGULAR AND PROBATIONARY EMPLOYEES DURING FISCAL YEAR 1966-67

	Resigned	Dismissed	Retired	Died	Super-annuated	Transfers Inter-Department	Totals
Head Office	50	3	2	2	3	4	64
Field	91	1	1	7	20	8	128
Total	141	4	3	9	23	12	192

Note: The staff turnover for the fiscal year was 7.7%. This is the ratio of separations to total regular and probationary staff.

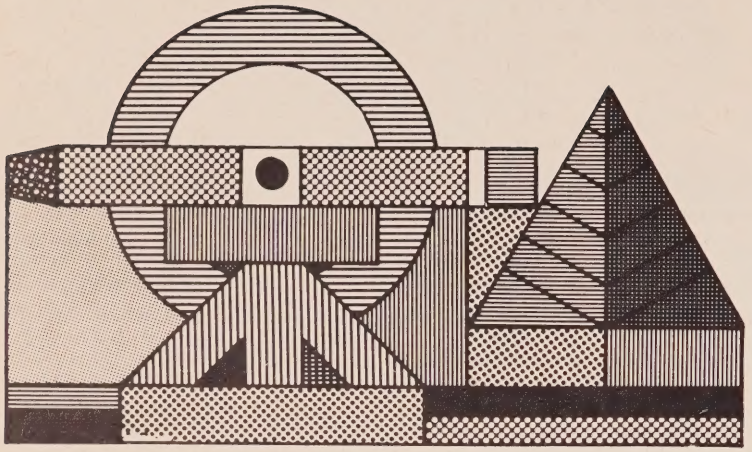
Table 5
NEW EMPLOYEES HIRED DURING THE FISCAL YEAR 1966-67

	Male	Female	Total
Head Office	41	27	68
Field	126	32	158
Total	167	59	226

Table 6
TOTAL PERSONNEL ON STAFF

	Regular	Probationary	Unclassified
March 31, 1967			
March 31, 1966	2,281	225	985

LANDS AND SURVEYS BRANCH



OBJECTIVES

1. To maintain a rational basis for Crown land retention, and disposal to maximize the social and economic benefits of land use, including the natural environment for recreation.
2. To develop, implement and maintain Land Use Plans which reflect the capacity of the land, the needs of people and economic realities in order to meet the above objectives and to aid in the establishment of land acquisition needs and priorities.
3. To conduct Crown surveys, maintain survey records and provide mapping services.
4. To undertake engineering consultation, studies and planning for fish and wildlife projects.

ORGANIZATION

Lands and Surveys Branch is divided into four sections with duties and responsibilities as follows.

LANDS

Administration of public lands and their disposition by sale, patent, vesting order, quit claim deed, lease, licence of occupation, or land use permit; release of reservations in patents, assignments and cancellations; reservation of lands for public and government uses; and maintenance of wilderness areas.

LAND ACQUISITION AND PLANNING

Recommendations and applications for purchase of private lands for public uses; development and co-ordination of land use plans in all districts for the management of renewable, natural resources; Recreational Land Inventory Sector of Canada Land Inventory; co-ordination of departmental A.R.D.A. projects; and liaison with Department of Agriculture and Food on private lands and other Departments on the socio-economic implications of land use objectives.

SURVEYS

Examination, recording and custody of original plans and field notes of restoration of original Crown survey points, retracement and Municipal surveys, and surveys of Crown lands for disposition; map compilation; authorization of geographical names; distribution of maps, publications and copies of survey records.

ENGINEERING

Approval of dams; licences of occupation for dams; flooding and diversions; water resource management; issuance and servicing of Water Power Lease Agreements; engineering consultations; feasibility studies, inspections, reports, planning for fish culture stations, wetland developments, fishways and other fish and wildlife projects; access roads.

LANDS SECTION

The uses for public lands are becoming more diversified and more dependent on and related to other areas of public administration. This has led to increased liaison and co-operation with people concerned with public health, water pollution, roads and land use planning in other Departments of Government.

More agricultural land is going out of production annually. This trend is illustrated by the very minor demand now for public land for farming. Only eight applications for such land received favourable consideration during the year.

Those areas of the Province which are without municipal organization and where there is a high demand for land for residential or other private uses, may be designated as restricted areas under the terms of Section 16 of the Public Lands Act. This Section gives to the Minister the authority to control buildings and other improvements on the land. It has proved to be an effective control in preventing the haphazard development of new communities. In collaboration with the Department of Municipal Affairs, two new restricted areas were established during the year and real progress was made toward developing several new townsites. It is anticipated that there will be a further expansion in restricted areas next year and there will be considerable increase in the number of improvement authorizations.

For reasons of sanitation and health it is accepted that a residential lot without sewer and water services should have a minimum area of not less than 15,000 square feet.

Interest in summer cottage lots continued to increase through the year, and resulted in a pronounced increase in the number of sales. Because of comparative scarcity and high demand, the few lots which became available within 150 miles of Toronto were sold by public auction. Public land suitable for summer cottage development will become increasingly scarce in southern Ontario. The lake development plan program was expanded during the year. Work done by the Ontario Land Inventory under the Federal-Provincial A.R.D.A. Agreement, has facilitated this program.

Increased interest was shown in commercial summer resort properties. There was a steady demand for land for golf courses and ski locations and an increased demand from service companies for land for pipelines, power and telephone lines, radio and television communications.

There has been an increasing interest in regard to water lot occupations and ownership of beach lands, particularly in the older, settled parts of Ontario.

LAND ACQUISITION AND PLANNING SECTION

Subsequent to the announcement of the Land Acquisition program in 1962, this Department has acquired 93,356 acres of land for water access points, district improvements,

general recreation (day use), parks, timber management, wilderness areas, nature reserves and wildlife management purposes.

This year, Treasury Board approved 53 proposals covering the acquisition of 71,887.95 acres, and an additional 46 proposals were approved for the acquisition of 43,329 acres by the Ontario Parks Integration Board. The number of acres acquired this fiscal year amounted to 18,845.71, while almost 66,000 acres in total were considered and subsequently rejected.

A total of 66 leases located in Rondeau and Algonquin Parks and Wasaga Beach comprising over 25 acres were purchased. Some 715 acres of land were donated to the Crown for use as park and public recreation areas.

Since the institution of the Federal-Provincial A.R.D.A. Cost-Sharing Program in 1964-65, the Province has acquired 25,522.15 acres of land under the agreement. This fiscal year 15,694.05 acres of land were acquired in five projects under the A.R.D.A. Agreement for timber and wildlife management purposes. Also pending approval, are proposals pertaining to 10 parks, seven wildlife management areas, and six timber management areas.

At March 31, 1967, some 40 per cent of the lake shore areas and all of the inventory for the portion of Ontario below the 43rd parallel has been completed under the Recreation Land Inventory sector of the Canada Land Inventory. This capability inventory will be of great value in determining which Crown lands should be reserved for public use, and in assessing areas of private land which should be purchased for public use.

SURVEYS SECTION

CARTOGRAPHY

Work of the Cartographic Subsection is divided into two areas of endeavour: compilation and production of new and revised editions of maps; and research, investigation and application of geographic names to geographical features in Ontario.

In pursuit of the objective to produce a total of 21 maps in a provincial topographic series on a scale 1 inch = 2 miles to cover areas in Northern Ontario, map sheets designated Hornepayne, Calstock, Taradale, Obakamiga Lake, Timmins and Gogama were printed. Revised editions of one eight-mile, one four-mile and three miscellaneous maps were produced, together with the last in a series of four surficial geology maps.

Editing of nomenclature on maps produced by federal and provincial mapping agencies was continued, and more than 600 new geographical names were recommended to the Canadian Permanent Committee on Geographical Names for approval, in addition to names either altered or rescinded as a result of toponymy research by field officers of the Geographical Branch, Department of Energy, Mines and Resources, Ottawa.

LEGAL SURVEYS

Legal Surveys Subsection carries out drafting and plan examination, and prepares instructions for surveys carried out by departmental surveyors, as well as for all surveys carried out by private surveyors to meet the needs of the retracement, restoration, subdivision and inspection programs.

Drafting of area plans, special maps and charts, legal survey plans resulting from departmental field survey activities, graphic illustrations, and redrafting of township plans on a scale 1 inch = 20 chains continued. In addition, the location and extent of all new alienations of Crown land continued to be plotted on township or area plans in order to maintain a graphic illustration of the status of land throughout the Province.

All plans of survey or plans compiled from available information leading to any form of alienation of Crown land were examined for compliance with statutes and departmental policy. These plans included surveyed individual summer resort, commercial or industrial locations, water lots and Crown subdivisions. In addition, returns from surveys carried out under instruction such as retracement, restoration and municipal surveys, which did not lead to alienation, were examined for compliance with statutes and instructions.

Field surveys for administrative purposes were carried out by field survey crews, with headquarters in Toronto, operating principally in the northern part of southern Ontario. These crews were engaged in determination of encroachment on Crown land and extent of ambiguous Crown grants, retracement, inspection and park surveys, together with other miscellaneous surveys.

SURVEY RECORDS AND MAP DISTRIBUTION

Custody of survey records and reproduction for sale and distribution and sale of maps and publications produced by the Department, as well as sale of maps produced by the Department of Energy, Mines and Resources, are main responsibilities discharged by the subsection.

Distribution of the Provincial Topographic Map Series more than doubled over the previous year, and an increase occurred in the distribution of map sheets in the National Topographic Map Series mainly due to an issue of new and revised sheets in the 1:25,000, 1:50,000 and 1:250,000 scale series. It has been noted a decrease in distribution of the territorial map series takes place as the popularity of the smaller topographic map series increases, and as new or updated sheets become available.

The quantity of sensitized reproduction material consumed for copying various topographic map and township tracings, Georgian Bay Island map sheets, summer cottage lot subdivisions and other miscellaneous plans, as well as surveyors' field notes, by the contact dry process and by photographic reproduction methods remained approximately the same as in the previous year.

The number of public inquiries requiring a search of original plans and field notes of surveys of Crown lands increased substantially during the year, as people sought historical information for Centennial projects.

ENGINEERING SECTION

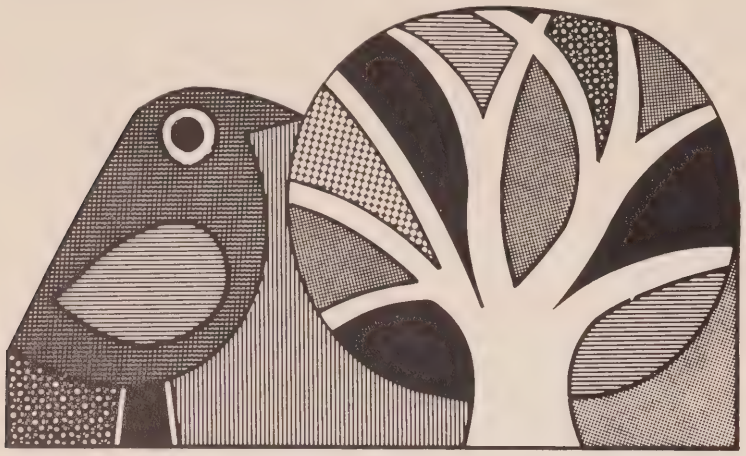
The Engineering Section continues to provide management of water resources through approval of dams under The Lakes and Rivers Improvement Act, determination of the terms and conditions, and preparation of water power lease agreements under The Water Power Regulation Act, administration of licences of occupation for dams constructed principally for log driving purposes, and administration of the reconstruction of old dams. In addition, special engineering consultation services were provided in hatchery design and construction, and fisheries and waterfowl management projects.

ACCESS ROADS

Some 1,850 miles of forest access roads were maintained during the fiscal year, which is an increase of 331 miles over the previous year, and represents an increase of 100 per cent over the total number of miles of road maintained during the fiscal year ending March 31st, 1964.

The criterion for eligibility for maintenance has not been broadened to include roads other than those used by the Department of pursuit of its programs, but has increased steadily as the Department's capital road construction program has expanded, and reflects to a degree the new policy to maintain some abandoned logging roads where it is in the interest of the Department to do so.

PARKS BRANCH



OBJECTIVES

1. To provide outdoor space in which the people of Ontario may enjoy the recreational pursuits usually associated with the natural environment.
2. To establish Provincial Parks to provide outdoor space where it is needed and to preserve important or unusual features of natural or historical significance.
3. To reserve areas for future use to meet anticipated demands.
4. To preserve the natural environment of parks by restricting practices which would alter the environment, and by providing only the facilities necessary for the well-being of park visitors and the enjoyment of outdoor activities.
5. To promote in park visitors an appreciation of park features and the inspirational enjoyment of nature.

ORGANIZATION

Parks Branch is divided into three sections and their subordinate units with duties and responsibilities as follows.

RECREATIONAL PLANNING

Responsible for long range planning for parks and related public recreational areas and activities, including analysis and projection of demand, determination of land requirements, preparation of provincial and regional recreation plans and recreation research to provide essential planning information.

PARK PLANNING AND DEVELOPMENT

Production of detailed Provincial Park master plans and control of all park development according to an approved design; planning and control of all park water supplies and sanitary installations; design and construction control of all park buildings and structures.

PARK MANAGEMENT

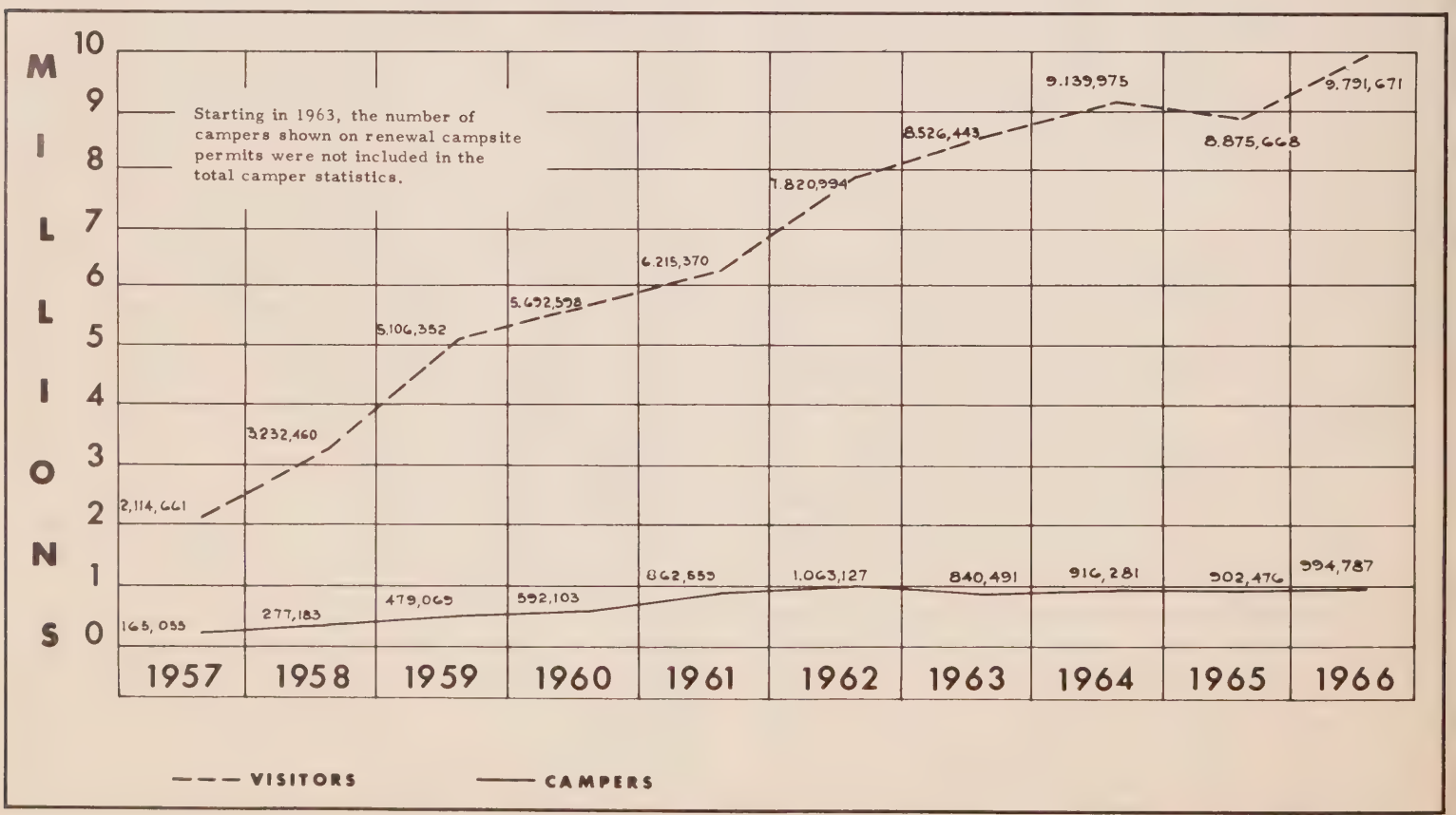
Establishment and control of standards of park operations; supervision of operating expenditures and revenues; preparation of operation concession agreements; compilation of park use data.

Interpretive: Establishment, operation and maintenance of interpretive programs — museums, exhibit centres, illustrated talks, conducted trips, interpretive trails and publications.

PARK USAGE

During the past fiscal year, 92 Provincial Parks were operated, including three new parks — Arrowhead, Ferris and North Beach. Approximately 3¾ million acres of Provincial Park land was available for the enjoyment of the public. A further 500,000 acres is designated as reserve for future development as Provincial Parks.

The 1966 season was the most successful operating season in the history of Provincial Parks in Ontario. Visitations increased over the previous year by 10 per cent to an all-time high of 9,791,671. Camper use increased by seven per cent, providing some 2,653,035 camper days. A total of 994,787 campers were recorded by permit in 1966. Although park fees remained unchanged, revenue increased some $215,000 to a total of $2,100,000 in 1966.



PARK DEVELOPMENT

Development appropriations were increased to $2,500,000, resulting in an additional 1,000 campsites, 23 comfort stations, 18 trailer dumping stations, eight major water and sewerage systems, and expanded parking area and beach development. This expansion took place in existing Provincial Parks and as part of initial development of four parks to be opened in the 1967-1968 fiscal year period.

HUNTING IN PARKS

Public hunting was continued in a number of Provincial Parks in southern Ontario — an area where such grounds are limited and demand is high. Waterfowl hunting under licence was permitted in Presqu'ile, Darlington, Holiday Beach, Long Point and Rondeau. Put and take pheasant hunting was very popular at Presqu'ile, Darlington and Sibbald Point parks this year. Hunting is not permitted in parks except those covered by regulations under The Game and Fish Act.

Table 1
RECORD OF PARK USE 1965 AND 1966

Administrative District and Park Name	TOTAL VISITORS 1965	TOTAL VISITORS 1966	TOTAL CAMPERS 1965	TOTAL CAMPERS 1966
LAKE ERIE				
Clay Creek	37,424	31,279	1,737	1,875
Holiday Beach	182,238	165,197	4,261	4,494
Ipperwash	180,590	163,906	16,764	15,888
Long Point	309,710	225,210	22,750	24,529
Pinery	333,235	552,566	51,805	58,422
Rock Point	23,373	21,231	3,445	4,601
Rondeau	591,140	820,603	32,261	33,641
Turkey Point	347,620	112,642	15,776	16,645
Wheatley	69,769	84,102	2,692	4,924
LAKE HURON				
Craigleith	61,097	72,237	12,271	13,847
Inverhuron	123,184	181,895	16,570	19,182
Point Farms	52,631	95,397	5,933	8,080
Sauble Falls	114,168	90,045	11,517	12,058
LAKE SIMCOE				
Bass Lake	123,201	132,249	14,425	18,357
Devils Glen	69,087	70,659	2,921	2,745
Earl Rowe	80,173	83,141	6,008	6,973
Mara	50,685	57,860	4,472	6,229
Sibbald Point	304,372	297,986	31,832	33,475
Six Mile Lake	112,001	111,592	13,010	14,132
Springwater	97,232	75,563	—	—
Wasaga Beach	969,056	1,037,941	—	—
KEMPTVILLE				
Fitzroy	77,404	128,872	7,789	10,324
Rideau River	245,575	216,106	18,017	11,847
Silver Lake	92,261	87,746	16,454	11,461
South Nation	40,729	26,745	4,252	3,956
LINDSAY				
Balsam Lake	6,793	—	6,793	8,647
Darlington	130,325	149,946	14,597	17,515
Emily	147,832	153,360	12,875	11,549
Mark S. Burnham	16,345	18,034	—	—
Presqu'ile	187,510	298,878	21,195	32,729
Serpent Mounds	137,449	143,163	13,307	13,077
PEMBROKE				
Algonquin	505,901	571,614	73,575	77,233
Carson Lake	4,557	4,800	3,012	3,466
Driftwood	7,788	9,566	4,712	6,039
TWEED				
Black Lake	47,466	69,632	6,561	8,758
Bon Echo	88,152	77,272	14,257	18,175
Lake St. Peter	24,428	34,884	3,398	3,140
Outlet Beach	409,766	414,029	20,288	20,983
Sandbanks	18,300	54,590	—	—
NORTH BAY				
Antoine	16,206	9,029	920	1,191
Finlayson Point	39,981	36,000	8,263	9,575
Marten River	132,316	130,000	11,199	12,809
Samuel de Champlain	56,890	50,986	7,490	9,454

Table 1
RECORD OF PARK USE 1965 AND 1966 (Continued)

Administrative District and Park Name	TOTAL VISITORS 1965	TOTAL VISITORS 1966	TOTAL CAMPERS 1965	TOTAL CAMPERS 1966
PARRY SOUND				
Arrowhead	—	5,732	—	1,235
Grundy Lake	136,580	193,665	17,051	27,723
Killbear Point	212,456	252,810	27,520	28,581
Mikisew	72,501	60,245	5,603	7,036
Oastler Lake	140,443	163,723	13,698	14,421
Restoule	24,416	22,878	3,044	3,397
Sturgeon Bay	29,796	28,145	5,307	5,347
CHAPLEAU				
Five Mile Lake	9,176	4,225	2,174	2,869
GOGAMA				
Ivanhoe Lake	13,637	27,921	3,383	3,826
SAULT STE. MARIE				
Batchawana	19,245	41,567	—	—
Lake Superior	113,353	134,570	31,295	37,056
Mississagi	7,561	10,287	2,494	2,987
Pancake Bay	69,641	97,170	28,764	29,157
SUDBURY				
Chutes	100,375	103,134	12,791	14,043
Fairbank	33,269	58,857	7,786	11,363
Killarney	17,641	41,556	2,887	3,160
Windy Lake	112,352	102,317	2,956	3,104
WHITE RIVER				
Obatanga	16,229	36,524	11,968	9,739
White Lake	57,198	110,990	17,735	18,457
COCHRANE				
Greenwater	13,205	19,196	1,390	2,492
Kettle Lakes	42,958	57,306	3,980	4,944
KAPUSKASING				
Nagagamisis	10,750	9,830	2,169	2,381
Remi Lake	31,584	28,489	3,483	4,232
SWASTIKA				
Esker Lakes	14,314	17,553	3,623	3,663
Kap-Kig-Iwan	18,194	16,391	2,685	2,835
GERALDTON				
Blacksand	18,532	21,596	5,767	5,709
Klotz Lake	18,502	13,326	2,257	2,875
MacLeod Lake	51,193	68,420	3,302	3,578
Neys	35,362	58,052	10,085	12,278
Rainbow Falls	79,046	72,932	21,295	21,781
PORT ARTHUR				
Inwood	19,677	21,198	10,944	13,689
Kakabeka Falls	245,432	317,776	23,606	22,483
Middle Falls	27,168	30,847	5,659	5,263
Sibley	26,573	28,878	11,023	11,575
FORT FRANCES				
Caliper Lake	41,823	29,894	7,079	6,207
Lake of the Woods	18,312	21,774	1,605	2,195
Quetico	64,432	65,128	7,836	5,314
KENORA				
Aaron	62,877	51,176	9,502	12,070
Blue Lake	32,634	26,791	6,548	12,975
Rushing River	101,899	97,839	13,605	13,315
Sioux Narrows	38,434	41,970	6,821	4,951
SIOUX LOOKOUT				
Ojibway	6,826	6,029	1,097	1,018
Pakwash	4,112	4,411	1,251	1,438
Provincial Totals	8,875,668	9,791,671	902,472	994,787

Table 2
PROVINCIAL PARKS FACILITIES (as of March 31, 1967)

District and Park	Camping Units	Swimming Beaches (feet)	Comfort Stations	Pit Toilets	Picnic Shelters	Picnic Area (Acres)	Museums	Nature Trails (Miles)	Hiking Trails (Miles)	Boat Ramps
CHAPLEAU										
Five Mile Lake	87	500	—	32	1	4	—	—	1¼	1
COCHRANE										
Greenwater	45	600	—	18	—	15	—	—	5¾	2
Kettle Lakes	95	4,000	1	44	1	40	—	1½	4	3
Tidewater	12	—	—	*4	—	1½	—	—	—	—
FORT FRANCES										
Caliper Lake	87	300	1	9	1	5	—	—	—	1
Lake of the Woods	100	1,500	—	16	—	10	—	—	1	2
Quetico	135	805	2	18	1	5	1	4	—	1
GERALDTON										
Blacksand	168	5,250	—	21	—	6	—	2	7	1
Klotz Lake	33	—	—	8	—	2	—	—	—	1
MacLeod Lake	54	4,240	—	20	1	5	—	1	1	2
Neys	80	5,280	—	14	—	2	—	—	1	—
Rainbow Falls	174	300	—	32	—	5	—	1	1	2
GOGAMA										
Ivanhoe Lake	143	8,500	—	24	—	17½	—	—	1	4
KAPUSKASING										
Nagagamisis	80	3,000	—	36	—	38	—	—	—	1
Remi Lake	80	2,500	—	36	—	27	—	¼	—	1
KEMPTVILLE										
Fitzroy	251	500	—	38	—	20	—	—	—	2
Rideau River	187	1,587	2	22	1	22	—	—	—	2
Silver Lake	197	650	1	20	1	2½	—	—	—	1
South Nation	28	—	—	6	—	8	—	—	—	1
KENORA										
Aaron	70	400	—	22	1	7	—	—	—	1
Blue Lake	100	1,950	—	20	1	3	—	—	—	2
Rushing River	150	650	1	30	1	23	—	1½	—	1
Sioux Narrows	60	150	—	12	1	2	—	—	—	1
LAKE ERIE										
Clay Creek	47	—	1	2	1	4	—	—	—	1
Holiday Beach	56	1,700	4	6	—	83	—	—	—	1
Ipperwash	266	1,600	7	2	2	8	—	—	—	2
John E. Pearce	—	—	—	4	—	2	—	—	—	—
Long Point	327	1,600	5	6	—	16	—	—	—	1
Pinery	1,075	27,000	9	71	—	20	—	3	2	2
Port Bruce	—	—	—	4	—	—	—	—	—	—
Rock Point	47	1,900	—	6	—	15	—	—	—	1
Rondeau	611	18,500	9	12	3	40	1	5¼	8½	2
Selkirk	42	1,600	—	6	—	—	—	—	—	—
Turkey Point	476	1,200	1	36	1	29	—	—	—	1
Wheatley	104	6,900	4	8	—	33	—	—	—	1
LAKE HURON										
Craigleith	170	3,100	3	2	1	12	—	—	—	—
Inverhuron	324	2,000	4	37	1	19½	—	1¾	—	1
Point Farms	215	1,600	4	8	—	10	—	—	—	1
Sauble Falls	146	—	3	—	1	9½	—	—	—	—
LAKE SIMCOE										
Bass Lake	154	350	3	16	2	18	—	—	—	—
Devil's Glen	20	—	—	3	—	6	—	—	—	—
Earl Rowe	400	2,000	4	21	—	40	—	—	—	—
Mara	102	550	2	12	—	22	—	—	—	—
Sibbald Point	718	2,000	10	64	8	130	1	—	—	1
Six Mile Lake	150	700	—	34	—	15	—	—	—	1
Springwater	—	—	3	2	2	63	—	—	—	—
Wasaga Beach	—	39,000	6	—	—	180	—	—	—	3

Table 2
PROVINCIAL PARKS FACILITIES (as of March 31, 1967) (Continued)

District and Park	Camping Units	Swimming Beaches (feet)	Comfort Stations	Pit Toilets	Picnic Shelters	Picnic Area (Acres)	Museums	Nature Trails (Miles)	Hiking Trails (Miles)	Boat Ramps
LINDSAY										
Balsam Lake	200	1,500	—	35	—	—	—	—	—	2
Darlington	400	1,000	2	42	3	40	—	—	—	1
Emily	130	650	1	16	2	25	—	—	—	3
Ferris	—	—	—	2	—	20	—	—	—	—
Mark S. Burnham	—	—	—	4	1	4	—	—	—	—
Presqu'ile	500	7,920	7	42	2	110	1	3	—	—
Serpent Mounds	130	600	1	17	1	30	—	—	—	3
NORTH BAY										
Antoine	29	—	—	16	—	13	—	—	—	1
Finlayson Point	136	216	1	21	—	4½	—	—	—	1
Marten River	237	1,000	2	66	—	6	—	—	—	4
Samuel de Champlain	224	1,400	—	40	—	15	—	—	9½	5
PARRY SOUND										
Arrowhead	102	900	—	30	—	1	—	—	—	2
Grundy Lake	485	1,650	—	102	1	8	—	—	—	5
Killbear Point	834	14,000	—	158	—	30	—	1½	3	4
Mikisew	157	1,500	—	32	1	10	—	—	¼	1
Oastler Lake	154	600	1	18	1	2	—	—	—	1
Restoule	258	4,000	—	43	—	12	—	—	2	2
Sturgeon Bay	87	150	—	16	—	¼	—	—	—	1
PEMBROKE										
Algonquin	1,375	3,500	8	200	—	7	2	7	1	4
Carson Lake	45	150	—	10	—	1	—	—	—	1
Driftwood	98	4,000	—	20	—	1	—	—	—	1
PORT ARTHUR										
Inwood	62	100	—	12	—	2	—	—	—	—
Kakabeka Falls	119	1,800	4	14	—	32	—	—	3½	—
Middle Falls	30	—	1	4	1	6	—	—	—	—
Sibley	350	2,000	—	38	1	25	—	8½	7	2
SAULT STE. MARIE										
Batchawana	—	8,100	—	14	—	10	—	—	—	—
Lake Superior	315	12,800	—	98	—	53½	—	3¼	1¼	—
Mississagi	38	400	—	12	—	8¾	—	—	—	1
Pancake Bay	278	10,800	—	52	—	8¼	—	—	—	—
SIOUX LOOKOUT										
Ojibway	68	300	—	18	—	5	—	2	—	2
Pakwash	57	5,300	—	28	—	7	—	—	—	1
SUDBURY										
Chutes	178	550	—	39	—	4	—	—	1	—
Fairbank	132	1,300	—	22	—	12	—	—	1½	1
Killarney	60	600	—	33	—	2	—	—	7	1
Windy Lake	76	5,000	—	30	—	100	—	—	—	1
SWASTIKA										
Esker Lakes	136	1,200	—	32	1	35	1	—	5	1
Kap-Kig-Iwan	64	—	—	28	1	30	—	½	3½	—
TWEED										
Black Lake	200	500	1	30	—	10	—	—	—	3
Bon Echo	400	2,300	4	65	—	35	—	—	2	3
Lake on the Mountain	—	—	1	—	—	4	—	—	—	—
Lake St. Peter	60	1,000	—	16	—	5	—	2	—	2
North Beach	—	4,000	—	16	—	75	—	—	—	—
Outlet Beach	480	10,900	6	39	—	200	—	—	—	4
Sandbanks	—	26,400	—	32	—	40	—	—	—	—
WHITE RIVER										
Obatanga	84	1,600	—	22	—	10	—	—	1¼	1
White Lake	225	3,600	—	44	—	8	—	½	—	2
Provincial Totals	16,859	301,248	130	2,532	49	2,112¾	7	49½	82¼	119

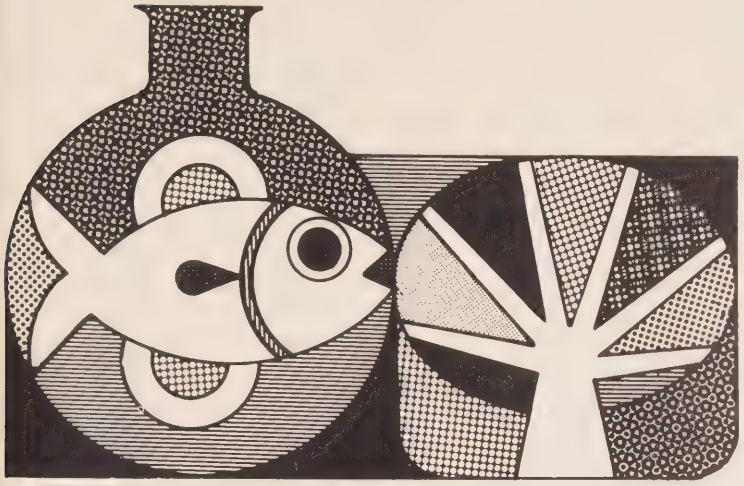
Table 3
SUMMARY OF ATTENDANCE FOR INTERPRETIVE PROGRAMS
Year Ending March 31st, 1967

ALGONQUIN PROVINCIAL PARK		
Museum Attendance (estimated)	131 days	189,148
Pioneer Logging Exhibit (estimated)	107 days	78,278
Conducted Trips	63 trips	4,633
Labelled Trail Registration	5 trails	64,404
Evening Lecture Programs	59 lectures	19,778
Special Groups	32 groups	1,316
	Total	357,557
RONDEAU PROVINCIAL PARK		
Museum Registration	113 days	27,144
Conducted Trips	3 trails	no record
Outdoor Theatre Programs	17 lectures	971
Special Groups	18 groups	813
	Total	28,928
SIBLEY PROVINCIAL PARK		
Conducted Trips	22 trips	339
Outdoor Theatre Programs	14 lectures	2,015
Labelled Trails	3 trails	3,000
	Total	5,354
PRESQU'ILE PROVINCIAL PARK		
Museum Attendance (estimated)	82 days	24,000
Conducted Trips	54 trips	1,553
Outdoor Theatre Programs	26 lectures	8,225
Labelled Trail Registration	2 trails	3,210
Special Groups	9 groups	248
	Total	37,236
QUETICO PROVINCIAL PARK		
Museum Attendance (estimated)	87 days	9,060
Conducted Trips	24 trips	435
Labelled Trail Registration	5 trails	3,117
Outdoor Theatre Programs	25 lectures	2,647
Special Groups	4 groups	150
	Total	15,409
SIBBALD POINT PROVINCIAL PARK		
Museum Registration	77 days	19,685
WASAGA BEACH PROVINCIAL PARK		
Nancy Island Museum Registration	100 days	25,473
PINERY PROVINCIAL PARK		
Conducted Trips	70 trips	2,567
Outdoor Theatre Programs	19 lectures	11,800
Labelled Trail	1 trail	no record
Special Groups	8 groups	392
	Total	14,759
LAKE SUPERIOR PROVINCIAL PARK		
Conducted Trips	4 trips	489
Outdoor Theatre Programs	16 lectures	3,149
Labelled Trail	2 trails	2,352
Special Groups	5 groups	519
	Total	6,509

Table 3
SUMMARY OF ATTENDANCE FOR INTERPRETIVE PROGRAMS (Continued)
Year Ending March 31st, 1967

INVERHURON PROVINCIAL PARK	
Exhibit Centre	19,182
OTHER PROVINCIAL PARKS WITH LABELLED TRAILS	
Lake St. Peter	2,400
White Lake	200
Peterborough Petroglyphs	no record
Kap-Kig-Iwan	2,200
Killbear	2,281
Rushing River	3,600
Remi Lake	190
Rainbow Falls	no record
Blacksand	no record
MacLeod	no record
Five Mile Lake	no record
Samuel de Champlain	120
Kettle Lakes	930
	11,921

RESEARCH BRANCH



OBJECTIVES

1. To provide management branches with useful, tested information on forest, fishery and wildlife resources.
2. To develop management techniques.

ORGANIZATION

The Research Branch is divided into four Sections and their subordinate units with the following functions and responsibilities.

FISHERIES SECTION

Great Lakes Unit: Rates of growth, reproduction and mortality of commercial and game fish in lakes Huron, Erie and Ontario.

Game Fish Unit: Lake trout, brook trout, smallmouth bass and walleye.

Selective Breeding Unit: Development of brook trout - lake trout hybrid which can survive in presence of sea lampreys.

Other Units: Lake productivity — classification of productive capacity based on chemical fertility; parasites — identification and assessment of effects; limnology — physical and chemical characteristics of lakes.

FORESTRY SECTION

Silviculture Unit: Studies of forest culture, reproduction and growth of important tree species and associated vegetation; logging effects on forest stands; cultural herbicides; controlled fires; seeding and planting.

Site Unit: Evaluation of soil features, climate and nutrients.

Tree Breeding Unit: Selection and breeding of forest trees of superior quality and resistance to disease.

Reforestation Unit: Studies of nursery problems and of planting and care of plantations.

Other units: Wood quality; forest mensuration and statistics; forest economics; white pine blister rust.

WILDLIFE SECTION

Big Game Unit: White-tailed deer, moose and upland caribou.

Predator Unit: Timber wolves.

Upland Game and Waterfowl Unit: Small animals and birds, such as rabbits and pheasants.

Diseases and Parasites Unit: Identification, frequency, distribution and effects.

Furbearers Unit: Habits, behaviour and effects of environment on animals such as beaver and marten.

MECHANICAL SECTION

Development, improvement and testing of equipment and instruments to meet special needs of Department.

FISHERIES SECTION

The Department's fisheries research program discovers new facts and techniques necessary to the scientific management of the complex sport and commercial fishery of Ontario.

Great Lakes Programs

LAKE ONTARIO

In 1966, studies designed to understand factors limiting the survival of juvenile whitefish were initiated in the laboratory. The lake trout project, in co-operation with New York State, has been an attempt to re-establish a self-reproducing population of this species in the lake.

A walleye project has continued since 1956 to determine levels of exploitation by anglers and by the commercial fishery in the Bay of Quinte. Considerable information on growth, food, mortality and movements has been accumulated.

A project initiated in 1958 and designed to learn something of the life history and ecology of the American eel during that part of its life spent in Lake Ontario has continued. This is of concern because of the possible effect of the St. Lawrence Seaway installations.

An attempt is being made to establish kokanee — a landlocked variety of sockeye salmon — as a new species in Lake Ontario for both commercial and recreational fishery. In each of the past three years plantings of eyed eggs and swim-up fry were made. As kokanee are plankton feeders, it is hoped that they will find the enriched open waters of Lake Ontario to their liking.

A start was made in 1966 to describe the life history, ecology, movements and abundance of white perch, which has quickly become a dominant species in the Bay of Quinte.

In 1966, a staff scientist investigated in Japan the potential of the Japanese salmons for introduction into Ontario. In addition to the merits common to the whole genus — high value and ease of management — two species are fresh water loving and warm water tolerant, and therefore may be worthy of trials here.

LAKE ERIE

Smelt and yellow perch have become the principal species of importance to commercial fishermen in Lake Erie. Most of the research was on reproduction, distribution and food of these two species.

Studies on smelt during 1966 concentrated on the problem of describing the distribution of young-of-the-year to supplement the virtually completed work on distribution of yearlings and adults. Reproduction was poor, probably because of a violent storm soon after peak spawning. A general survey of smelt abundance by area was conducted throughout the lake during July and August, making use of information on vertical distribution that has emerged from past studies.

The effect of dominant year classes in yellow perch was the subject of intensive study.

LAKE HURON

The present emphasis of research in Lake Huron is on whitefish, and the principal concern is the wide variation in the year class success which causes fluctuations of abundance from year to year. There are several discreet populations in different parts of the lake which further complicate the problem. Information is being collected on age, size etc., of whitefish caught by various types of gear. One of the most important results will be the hoped-for ability to forecast catches in subsequent years.

In 1966, commercial fishermen at Providence Bay reported taking 16 lake trout x brook trout (splake) which were identified as being from the 1963 Providence Bay planting. This catch, added to the 1964 catch of 2,500 fish and the 1965 catch of 839, gives a total of 3,355 of the 1963 planting of 3,500 fish. In June 1966, 50,000 splake yearlings were planted in Burnt Island Bay, Lake Huron. In South Bay in 1966, 4,000 splake were planted.

The greatly increased planting program of splake in Lake Huron has followed the gradual improvements in successive generations of hybrids derived from the research program. Additional numbers of year classes are in culture and will come through the selection procedures in subsequent years. In co-operation with U.S. agencies for the rehabilitation of the Lake Huron fishery (splake replacement of lake trout), the final stages are being reached in the testing program. Real success is largely dependent on the ability of the hybrids to reproduce naturally.

Game Fish Program

The Harkness Laboratory was operated again in 1966 in accordance with the terms of the agreement between the Department of Lands and Forests and the University of Toronto. The facilities were used by staff and graduates of the University of Toronto and the Ontario Research Foundation.

In addition to the continued analysis of long-accumulated creel census data, projects included experimental plantings, population dynamics, lake trout biology, and plankton-feeding versus fish-feeding lake trout. Also, a scientist made a trip to a number of European countries to investigate the potential of certain of their fish for introduction to Ontario waters, particularly the Great Lakes, where conditions due to water enrichment have changed markedly. Four species would appear to have real potential.

Studies of natural populations of brook trout were pursued in 1966 as part of a background against which experimental results are to be compared. Projects in Algonquin Park lakes included stocking rate studies using hatchery-reared trout; plankton and bottom fauna studies; population fluctuations throughout the year; fish toxicants to remove undesirable competing species; spawning facilities and planting techniques.

The smallmouth bass project was activated in 1966 in Lake-of-the-Mountain. This is a study of factors, especially summer water temperatures, which influence the production of eggs, fry and fingerlings up to the dispersal stage. These include studies of tagging, first year growth, creel census data, evaluation of hatchery plantings and sub-lethal effects of pollutants. Essential laboratory work was conducted at the nearby Glenora station.

Ecological studies of walleyes in 1966 were pursued at Baptiste Lake. Emphasis was placed on the factor of light intensity, which seems to play a major part in determining the location and activity of walleyes. They were generally found to be shielded from direct sunlight.

Other Research Programs

The limnology unit continued to co-ordinate meteorological and hydrographic data collected from the several fisheries research units with special relation to standardization, and with particular reference to the Great Lakes — such as of the thermal regime and zooplankton of South Bay — and hydrography and phytoplankton of the Bay of Quinte.

The selective breeding program on splake (referred to previously under Lake Huron) continued to make advances in 1966, using both laboratory and field studies of more advanced hybrid generations.

During 1966, the inventory unit continued to assess the productivity of Ontario lakes, concentrating on factors of total dissolved solids, alkalinity and turbidity.

A scientist continued to examine parasites collected by field staff, with the object of eventually determining their effect on abundance of important fish species.

FORESTRY SECTION

The following is a brief summary of forestry research conducted from Maple headquarters and five permanent research establishments throughout the Province. In addition to this, the Research Branch is working co-operatively with the Faculty of Forestry, University of Toronto; the Ontario Research Foundation; Canada Department of Forestry; and the wood-using industries of the Province.

Regional Silvicultural Research

It is to be understood that while the following summary is dealt with under the headings of the several regions of the Province, in actuality the researchers expand their programs beyond the boundaries of the regions.

NORTHWESTERN ONTARIO

In 1966, the field program was dominated by re-examination work on a large number of long-term regeneration and stand development plots according to their five-year re-measurement schedule. Another important development was the establishment of a program of research for black spruce — a species which had not received sufficient research attention in the past.

One of the re-examination programs continued in 1966 was concerned with white spruce - balsam fir stands. This study relates to the long-term effects of diameter limit selective cutting, mechanical scarification, and conventional versus mechanical clearcutting. Of especial note is that abundant white spruce regeneration follows scarification in mixedwood stands, but it was found necessary in 1966 to release this desired crop from re-invading dense underbrush by use of selected toxicants.

Another study continued to determine the effects of mechanical clearcutting of all species in jack pine cover types embracing jack pine, trembling aspen and black spruce to favour jack pine.

A poplar project was continued to determine the relationship between aspen reproduction of high quality and its age, site type and density following mechanical cutting operations.

CENTRAL ONTARIO

Since the start of work in this region in 1959, concentration has been on laboratory and field studies of problems of tree nutrition, particularly in spruce species, and studies of the productivity, ecology and racial variation of red spruce.

The special attention being given to red spruce is because this species has characteristics which make it very useful in improving the productivity of derelict tolerant hardwood and mixedwood stands. The study is designed to measure growth and productivity of red spruce in poor and mixed stands on all physiographic sites across its range in Ontario.

Red spruce has been studied from a number of different points of view over the past several years. These may be most easily grouped under three general headings:
Productivity — ecology involving a number of fundamental aspects, including growth and nutrition.

Taxonomical and genetical relationships within and between other species, including provenance studies, etc.

Practical applications for management in the near future, including underplanting studies and assistance in seed production areas, etc.

One more year should complete the general field work. This will be followed by a sampling in our rather extensive spruce provenance plantations.

SOUTH-CENTRAL ONTARIO

The forester in charge of research work in the region was occupied almost exclusively in furthering the large-scale planting operations of tubed seedlings by the Timber Branch. In the late spring and summer of 1966, a number of tubed seedling production sites in the Districts were visited in an effort to overcome problems that had arisen in germinating seed and in growing seedlings. The operational manual of instructions was revised.

Silvics, Silviculture and Management of Sugar Maple and associated species. A program was continued on the study of the ecology of this forest association, and to apply the knowledge gained in developing appropriate silvicultural and management procedures for optimum production of high quality hardwood timber.

One project may be selected for mention here: research into the problems of production of high quality sugar maple. During 1966-67, additional information was gathered on tree quality and diameter distribution in a number of different stands as a basis for developing controlled methods of improvement cutting. A broad program of cutting is planned to cover the variations which occur in quality, stocking and species composition in various stands.

Part of the work initiated in this project has followed an evolutionary shift toward a more fundamental framework and has been relocated at Maple headquarters. Objectives of this study involve the dynamics of mineral stains, decay and tree form defects in sugar maple.

SOUTHWESTERN ONTARIO

Research in this region aims to suggest good forest management practices on stands most of which are in private ownership and have become derelict. Particular attention was given in 1966 to the propagation and cultural treatment of silver maple and eastern cottonwood, largely to replace the heavy mortality in elm from the Dutch elm disease. Studies were continued in 1966 of these two species, which are about the only commercial trees capable of growing in the swamps of southwestern Ontario. These included growth, thinning and planting studies, as well as the mass production of phenotypes vegetatively by budding, layering and cuttings.

Work continued on the establishment of such species as red oak, basswood, hybrid poplar, large-toothed aspen and white and red pine.

Research was also furthered in the use of herbicides, silvicides and soil sterilants, as well as in maple sap and syrup productivity.

SOUTHEASTERN ONTARIO

Research in this region has been primarily concerned with the ecology of the tolerant hardwood association, especially the treatment of cutover stands to improve quality. The principal projects are prescribed burning and the silvics of basswood.

The objective of the prescribed burning project is to determine the effects of fire in hardwood stands to improve regeneration. Studies have been undertaken in four areas which have met with varying degrees of success. While reexamination of plots on several of these areas will be continued, it has been suggested that the use of prescribed fire in hardwoods should be studied on an operational scale where realistic appraisal of its potential can be made.

The objective of the basswood project is to determine the possibility of increasing the proportion of this high quality, fast-growing species in hardwood associations, particularly with maple. Studies were continued on fruit and seed relating to successful germination; natural regeneration after various treatments; results of planting nursery stock; and the management in general of hardwood stands with basswood admixture.

A Research Information Paper was published in 1966 on one aspect of the planting on shallow lands in the Kemptville district.

Maple Headquarters Research

REFORESTATION

Nursery and Planting: The objective of this program is the procurement of information through research for the scientific advancement of the reforestation program of the Department. The work was initiated in 1953 with the chief areas of attention being nursery operations, handling of shipping stock, planting methods, frost damage to plantations, and fertilization. Work was continued on the following projects in the year 1966-67. (The figures in brackets indicate the years in which the projects were started.)

Culling and grading of nursery stock (1953); depths and methods of planting (1948); seedlings vs transplants (1957); moisture retaining materials (1955); nursery stock field storage (1956); wrapping materials (1956); methods of planting for underplanting (1955); Dunemann planting stock (1955); root pruning of nursery stock (1957); nutrient correlations (1964); adjustment of soil acidity (1959); frost studies (1962); ecotypical variation in black spruce (1959); planting throughout the growth season (1951); studies of planting check (1960); hormone studies (1962); drought studies (1965); root coating (1966); seedbed densities (1966); and forest fertilization (1958).

TREE BREEDING

The aim of forest tree breeding is to supply seed and plant materials that, from a genetic standpoint, are best suited for the purposes of artificial forest regeneration. These studies were initiated in 1946 and are comprised principally of white pine and poplar projects.

The main objectives in white pine breeding are resistance to blister rust and weevil, and satisfactory growth form and growth rate. The program has been continued since 1946. Intensive acquisition of breeding materials, mainly exotics, has been in progress throughout. Present emphasis on interspecific hybridization is producing rust-resistant materials of direct use-value.

The poplar breeding program, initiated in 1947, aims to produce aspen-like hybrids, suitable for growing in southern Ontario, having good growth rate and growth form, good wood and ease of vegetative propagation. At present, the main objective is the production of new hybrids with good rooting ability from stem cuttings.

The principal aim of the breeding program in hard pines was primarily, at the time of its initiation in 1952, to find resistance to the pine shoot moth. Recently, the objective has changed toward production of a red pine-like tree, superior in growth rate, branching habit, resistance to shoot moth, and adaptability to red pine sites.

A spruce breeding program was started in 1964 to determine the genetic variability of the native spruce species, the genetic relationships of native and exotic species and the value of certain spruce hybrids. Controlled pollinations with black spruce, white spruce and several exotic species were continued in 1966.

WHITE PINE BLISTER RUST SURVEY

The blister rust work, which has been continued by the Research Branch since 1942, is designed to obtain quantitative data on the occurrence of rust and rust damage at selected stations. Such data may be used to characterize epidemic conditions and as an aid to prognosis.

In 1966, the second and fifth periodic examinations were made in the North Bay and Pembroke Districts respectively.

WOOD QUALITY

The purpose of the studies of wood quality is to define the specific physical and chemical wood characteristics which contribute to superior quality in end-use products, and to relate these characteristics to heritable and environmental factors. A wood quality unit is established in the Research Branch, and the Ontario Research Foundation receives an annual grant from the Department for making pulping and other tests on wood samples provided them.

To date, work has concentrated on black spruce.

The Ontario Research Foundation did work in 1966 in three areas: wood structure related to paper quality, black spruce wood quality in mature stands, and effects of extractives on wood quality. Complementary work by the Research Branch included determination of mean specific gravity, determination of compression wood percentage, and comparisons of tree hole density and core samples.

SITE

The objective of the site research program is to determine the productivity of land. Consequently, work has been directed toward obtaining knowledge pertaining to the relationships between soils, climates, and crops, and to organize this information into a classification system adaptable to various types of management, with the forest being the major crop considered. Much of the effort of the site research unit in 1967 was concerned with the ARDA program, especially in map production, which will be reported elsewhere. The general sub-divisions of the work as a whole come under the headings of regional, factorial and land productivity research.

Regional site research was continued in 1966-67 comprising the recognition, classification, mapping and description of physiographic sites, as well as the determination of natural vegetation succession, including the initial evaluation of the potential productivity of the more important sites.

Two projects which were completed in 1966 may be selected for reference: field and laboratory investigations of the distribution of the parent soil materials on the Canadian Shield south of the Ottawa River; mapping the land units of the Swastika District to provide District staff with an ecological framework for their land use plans.

In 1966, further progress was made in factorial site research, which was developed from the need in regional site research for a better understanding of soil and climatic factors which influence forest growth.

Field and laboratory nutrient studies have dealt with such subjects as the release from minerals of calcium and dilute sulphuric acid, especially relating to uptake by jack pine from three types of sand; availability of nitrogen and phosphorous through processes in the forest humus rather than by weathering of mineral materials; and studies in soil genesis dealing with the influence of the forest on the soil. The research program dealing with water as a site factor is continuing and includes the assessment of the effects of moisture regimes on forest growth within specific climatic regions. Several programs which received particular attention in 1966 may be mentioned: comparison of soil moisture and current radial growth with and without irrigation; the influence of various moisture supplies and growth of red pine, white spruce and larch seedlings.

Most of the timber productivity part of the research in 1966 was conducted in co-operation with other agencies and related to red pine plantations and hard maple woodlots.

FOREST MENSURATION

Growth and yield studies in 1966 included measurements on permanent sample plots in red pine plantations and in natural stands of red and white pine; construction of improved tree volume tables, and improved methods of timber estimating. Statistical and advisory services were rendered to research foresters in tree breeding, reforestation and silviculture, with particular reference to height and diameter growth. Consultants in statistics and computer programming assisted in all of the foregoing work.

MATHEMATICAL STATISTICS

A specialist in statistical analysis and computer programming provided services which included consultations on, and participation in, planning, designing, analyzing and interpreting the results obtained from experiments, as well as from collections of data by numerous investigators. Most of these services were rendered to the several sections of the Research Branch, but some were made use of by other Branches of the Department and co-operating agencies. In addition to providing sampling systems and computer programming, the services included much data processing.

FOREST ECONOMICS

A research staff forestry economist advised and assisted on several forestry projects including the economics relating to plantation forests of red and white pine; the preparation of yield tables for plantation-grown red pine and white spruce; and the design of a system for orderly maintenance for newly established sample plots for growth and yield studies. In addition, the economist participated in a feasibility study which was related to the establishment of pulp and paper manufacture in the Red Lake area.

FOREST PROTECTION

Studies were initiated in the evaluation and development of fire prevention methods, fire control systems, and reduction of hazards; testing and development of insect and disease control methods.

Dr. W. R. Haddow retired from service after 44 years with the Department — 25 years in Research.

WILDLIFE SECTION

Wildlife research has been directed toward the futhering of our knowledge of economically important birds and mammals, and to suggest means by which these could be of greater value to the trapper, hunter, naturalist, and the general public. Research projects have been developed around most of the major species of wildlife which provide sustenance or sport in Ontario.

Close co-operation is maintained between Research personnel and the staff of the Fish and Wildlife Branch. Wildlife research personnel have also benefited greatly by their close working relationships with scientists in other government departments, universities, and research organizations. Within the Wildlife Research Section there are units concerned with furbearing animals, wildlife diseases and parasites, upland game and waterfowl, big game, and predators. While the Southern Research Station serves as a base headquarters, most of the work is done in the field — across the Province and north from the Great Lakes to Hudson Bay. A Wildlife Research Station, located in Algonquin Park, serves as a centre for some field studies.

FURBEARERS

The management of populations of furbearing animals is probably more complex than for other species of wildlife. Essentially, there are two groups of factors influencing the production of fur: socio-economic and biological. To date, furbearer research has been chiefly concerned with biological factors affecting fur production.

Research is continuing on the dynamics of beaver populations and the influence of various factors including trapping pressure. The program in the Patricia Central and West portions of northern Ontario, initiated in 1957, is to determine the factors responsible for wide fluctuations in northern beaver populations, and to recommend management practices which would increase numbers of beaver.

Analysis of field data collected on otter showed that their movements were confined to smaller areas than was previously supposed. Also, their food consists entirely of aquatic organisms with game fish comprising a very small part of these.

Other ecological and population studies were continued on marten and mink.

WILDLIFE DISEASES AND PARASITES

This unit is responsible for the identification of diseases and parasites, and the assessment of their frequency, incidence, distribution and effects. Research staff provided a diagnostic service to field staff, in conjunction with the continuing survey of diseases and parasites of wildlife. The use by field staff of a recently prepared manual on this subject greatly assisted this project.

Studies to determine the status of the kidney worm in mink, and the diseases and parasites of moose were continued. In 1966, the red fox was still the most important wildlife vector of rabies in Ontario. However, it is still almost absent from some parts of the Lake Erie district. The reasons for this are not known, but it is apparent that some unknown factors in the environment are restricting rabies epizootics among wildlife there. Studies of this situation may provide the answers.

UPLAND GAME AND WATERFOWL

Grouse, pheasants, rabbits, squirrels and other species of smaller birds and mammals (commonly known as upland game) ducks and geese, provide sport for more hunters in Ontario than all other wildlife species combined.

Of considerable concern in the management of grouse and geese are their taxonomic relationships and behavorial characteristics. Research continued in various species and sub-species of grouse and Canada geese, both in Ontario and elsewhere, with the ultimate objective of discovering whether a biologic tag that could be used at any time of the year to determine the origin and distribution of discreet populations could be found. Preliminary results are promising in identifying individuals from specific populations.

Research on waterfowl was confined to the development and testing of a method to determine the annual breeding success of Canada and snow geese in northern Ontario.

BIG GAME

Big game research, which is mostly of an ecological nature, is conducted on deer, moose and woodland caribou. Data were again collected in 1966 from the network of stations established to record snow depth — probably the most severe factor affecting survival and distribution of deer. Major logging activity during the 1850-1910 period resulted in residual stands that were favourable to deer until recently. Much of this forest has again become too mature for deer. Research is concentrating on learning to create an optimum balance between deer and timber crops.

There is an abundance of moose in Ontario. Management problems centre around poor access over the moose range as a whole, and a consequent under-harvest of the expanding populations.

The research task is to identify and measure the forces of the environment that are preventing the caribou populations from expanding to a range area apparently several times larger than which they now occupy. Caribou are an important source of food and clothing for northern Indians.

PREDATOR RESEARCH AND MANAGEMENT

During 1966, the wolf predator control program has been directed to training fur-trapping licencees to accept the responsibility for control of their trap lines. Extensive programs of this nature were implemented in the Parry Sound and Pembroke Districts. There are tentative plans to carry out similar extension training programs in other districts where it would be considered necessary. Wolf censusing is being continued over areas where hunter success with respect to deer has declined over recent years, in order that predator control measures may be effected if the situation warrants it.

Research on timber wolves and their effects on prey populations in Parry Sound District were continued. Also preliminary populations studies on black and polar bears were conducted.

Reports

Research Branch reports published during the year ending March 31, 1967.

FISHERIES

Neoechinorhynchus Notemigoni N. sp. (Acanthocephala: Neoechinorhynchidae) from golden shiner of Lake Ontario. Alex Dechtiar. Can. J. of Zoology, Vol. 45 (1967), pp. 155-159.

Effects of fin-clipping on mortality and growth of yellow perch with a review of similar investigations. Danial W. Coble. J. of Wildlife Mgt., Vol. 31, No. 1, January 1967, pp. 173-180.

A new copepod genus in the plankton of the Great Lakes. Daniel J. Faber and E. G. Jermolajev. Limnology and Aceanography, Vol. 11, No. 2, April 1966, pp. 301-303.

The South Bay Fisheries Research Station. F. P. Maher. Ont. Fish and Wildlife Review, Vol. 5, No. 1, Spring 1966.

Alkaline phosphatase in fish scales. D. W. Coble. J. Fish. Res. Bd., Canada. 23(1), 1966, pp. 149-152.

Comparative summer limnology of Inner Long Point Bay, Lake Erie and its major tributary. A. H. Berst and H. R. McCrimmon. J. Fish. Res. Bd., Canada. 23(2), 1966, pp. 275-291.

The significance of food habits in the biology, exploitation and management of Algonquin Park, Ontario, lake trout. N. V. Martin. Trans. of the Amer. Fish. Soc., Vol. 95, No. 4, October 1966, pp. 415-422.

Effects of a diet of raw smelt on lake trout. D. W. Coble. Can. Fish. Cult. No. 36, Dec. 1965. (Not released until 1966).

Relationship of temperature to total annual growth in adult smallmouth bass. Daniel W. Coble. J. Fish. Res. Bd., Canada, Vol. 24, No. 1, 1967, pp. 87-99.

A new species of monogenetic trematode, **Octomacrum Semotilli,** from the creek chub **Semotilus Atromaculatus** (Mitchell), from Algonquin Park lakes. A. Dechtiar. J. of Zoology, Vol. 44, No. 5, Sept. 1966, pp. 821-824.

The thermal regime of South Bay, Manitoulin Island, A. M. McCombie. J. Fish. Res. Bd., Canada, Vol. 24, No. 1, 1967, pp. 101-125.

Freezing and thawing of Toronto Harbour. D. V. Anderson and G. H. McTaggart-Cowan, Research Report No. 70.

Hamilton Bay — the model of a natural waste treatment reactor. D. V. Anderson and D. H. Matheson. Research Report No. 73.

FORESTRY

Sap and syrup of five maple species. H. C. Larsson and P. Jaciw. Research Report No. 69.

Fertilization of red pine on a sand plain. R. H. Leech. Research Report No. 72.

Root pruning of nursery stock. R. E. Mullin. For. Chron., Sept. 1966, pp. 256-264.

An effect of sphagnum on the growth of black spruce. J. K. McEwen. For. Chron., Vol. 42, No. 2, June 1966.

Influence of depth and method of planting on white spruce. R. E. Mullin, J. of For., July 1966, pp. 466-468.

Overwinter storage of baled nursery stock in Northern Ontario. R. E. Mullin. Comm. For. Review, 45(3), pp. 224-230.

Glacial history of Northeastern Ontario. I. The Cochrane-Hearst area. A. H. Boissonneau. Can. J. of Earth Sc., Vol. 3, 1966, pp. 559-578.

Frost ring formation in the stems of some coniferous species. C. Glerum and J. L. Farrar. Can. J. of Botany, Vol. 44(1966), pp. 879-886.

Summer and fall plantings of jack pine in Ontario suffer high mortality and slower height growth after 15 years. R. E. Mullin and W. R. Bunting. Tree Planters' Notes, Vol. 18, No. 1, March 1967.

White pine survival and growth similar, regardless of planting depths and methods, in Ontario tests. R. E. Mullin. Tree Planters' Notes, Vol. 18, No. 1, March 1967.

WILDLIFE

Extralimital occurrences of raccoons in Ontario. D. W. Simkin. Can. Field Naturalist, Vol. 80, No. 3, July-September, 1966, pp. 144-146.

Polar bear of Canada. G. Kolenosky and R. O. Standfield. Animals Magazine, Vol. 8, No. 19, April 12, 1966.

The prairie chicken in Southwestern Ontario. Harry G. Lumsden. Can. Field Naturalist, Vol. 80, No. 1, Jan.-March 1966, pp. 33-45.

A cursory examination of the fur returns from three Indian bands of Northern Ontario. Edward S. Rogers, Dept. of Ethnology, Royal Ontario Museum, University of Toronto. Research Report No. 75.

MECHANICAL SECTION

The main work of the Section during the year was, as in the past, concerned with the development of special equipment and instruments required for the Research Branch in fisheries, forestry and wildlife. A list of the principal projects worked on follows:

Fisheries. Electronic brine shrimp counter, plankton traps, marine installations.

Forestry. Scanning adaptation unit for data translator, portable power increment borer and pack board, increment core examiner and vernier attachment, micro-digestion apparatus for nitrogen determination, water bottom soil sampler, dendrometer tape accessories.

Wildlife. Animal tranquillizer dart ejector, deer tagging loops (new design).

Special equipment was also designed for other Branches of the Department:

Forest Protection Branch. Fire pump and lubricant testing, infra-red fire hose drier, reciprocating folder for fire hose, pegboard hose folder (re-designed), fire hose vulcanizers, fire hose lead markers.

Operations Branch. Photo copying table.

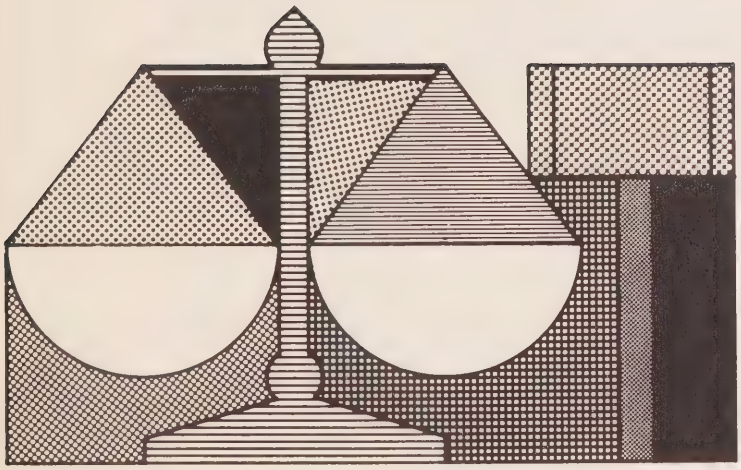
Parks Branch. Beach area algae cleaners.

Timber Branch. Aerial seeder improvements, broadcast seeder for snow vehicle, improved towing swivel for sacrification equipment.

In addition to the foregoing, the Section provided engineering consulting services to the Department, as required.

Mr. M. H. Baker retired from service in the summer of 1966 after 41 years with the Department, more than half of which was with the Research Branch.

LAW BRANCH



OBJECTIVES

1. To provide legal counsel and services for the Department.
2. To maintain services of the Patents Office.

ORGANIZATION

The duties and responsibilities of Law Branch may be summarized as follows:

Policy: establishing and reviewing Department policy with respect to legislation, regulations and administration; and integrating Department policies into those of the Government.

Interpretation of statutes and regulations.

Advice to Branches and field offices on the legal position of the Department in all matters affecting it.

Preparation and Processing of agreements; briefs, opinions and memoranda on special subjects; leases; legislation; licences; office consolidations of statutes and regulations; pleadings; recommendations to Council; and regulations under the various statutes administered by the Department.

Services (miscellaneous): collection of bad accounts; conducting litigation; conveyancing; representing the Department as Counsel in Provincial Land Tax Appeals; settlements of claims and disputes; and title searching.

Liaison with federal officials on matters concerning fisheries; federal canal systems, harbours and lands; and Indian reserves and rights of Indians, particularly regarding hunting and fishing.

Patents Office: maintenance of records of Crown land; advising the public on records; compilation of statistics; cancellation of Crown land sales; domesday books; forfeitures; leases; licences; and preparation and engrossing of documents disposing of Crown land including leases, letters patent and licences of occupation.

Legislation

At the Session of the Legislature, which convened on the 25th day of January, 1967, and prorogued on the 15th day of June, 1967, amendments were made to five statutes administered by the Department.

THE FORESTRY AMENDMENT ACT, 1967

The definition of "forestry purposes" was amended to provide that the term includes the production of wood and wood products, provision of proper environmental conditions for wildlife, protection against floods and erosion, recreation, and protection and production of water supplies.

THE GAME AND FISH AMENDMENT ACT, 1967

Subsection 3 of Section 6 of The Game and Fish Act, 1961-62, was re-enacted to provide for management agreements with owners of land respecting hunting and fishing rights, habitat improvement work, protective measures, stocking programs, fencing and erection of signs and other management practices. On registration, such agreements are binding upon subsequent owners.

Subsection 8 of Section 34 of the Act was amended to provide that holders of a class of licence designated by the regulations shall wear a badge which clearly shows the number of the licence. Section 83 of the Act was amended to provide for regulations designating such licences.

THE PUBLIC LANDS AMENDMENT ACT, 1967

Section 43 of The Public Lands Act was amended by adding two subsections which provide for the entering into of agreements with owners of land respecting the erection, maintenance and operation thereon of a public work within the meaning of The Public Works Act and provide that upon registration, such agreements are binding upon subsequent owners.

THE SURVEYS AMENDMENT ACT, 1967

Section 60 of The Surveys Act was amended by adding a clause which authorizes the making of regulations establishing, governing and regulating systems of co-ordinate surveys.

THE TREES AMENDMENT ACT, 1967

The definition of "forestry purposes" was amended in the same manner as the definition in The Forestry Act.

EFFECTIVE DATES

The Forestry Amendment Act, 1967, The Surveys Amendment Act, 1967, and The Trees Amendment Act, 1967, came into force on March 22nd, 1967. The Game and Fish Amendment Act, 1967, and The Public Lands Amendment Act, 1967, came into force on June 15th, 1967.

Twenty-three regulations made under the authority of the Statutes administered by the Department of Lands and Forests were approved and filed during the fiscal year from April 1st, 1966 to March 31st, 1967.

The following are the regulations which were approved and filed:

Regulations

THE GAME AND FISH ACT, 1961-62

O.Reg. 214/66 — Amending O.Reg. 343/64 — Furs.

O.Reg. 237/66 — Amending O.Reg. 247/63 — Snares.

O.Reg. 253/66 — Revokes O.Regs. 159/65 and 181/65 — Open Seasons — Game Birds.

O.Reg. 260/66 — Amending O.Reg. 46/65 — Fishing Licences.

O.Reg. 272/66 — Amending O.Reg. 139/65 — Open Seasons — Deer, Moose and Bear.

O.Reg. 273/66 — Amending O.Reg. 229/64 — Hunting Licences — Issuance.

O.Reg. 288/66 — New and Revoking O.Reg. 153/65 — Open Seasons — Rabbit and Squirrel.

O.Reg. 314/66 — Amending O.Reg. 9/66 — Open Seasons — Fur-bearing Animals.

O.Reg. 316/66 — New and Revoking O.Reg. 163/63 — Sale of Bass and Trout.

O.Reg. 330/66 — Amending O.Reg. 253/66 — Open Seasons — Game Birds.

O.Reg. 334/66 — Amending O.Reg. 272/65 — Open Seasons — Deer, Southern Ontario.

O.Reg. 335/66 — Amending O.Reg. 286/63 — Hunting in Provincial Parks.

O.Reg. 342/66 — New — Hunting on Crown Lands.

O.Reg. 368/66 — Amending O.Reg. 46/65 — Fishing Licences.

O.Reg. 369/66 — Amending O.Reg. 22/65 — Crown Game Preserve — Luther.

O.Reg. 70/67 — New — Bullfrogs.

O.Reg. 77/67 — Amending O.Reg. 229/63 — Hunting Licences — Issuance.

THE PROVINCIAL PARKS ACT

O.Reg. 175/66 — Amending Reg. 499 of R.R.O. 1960 — General.

O.Reg. 343/66 — Amending Reg. 498 of R.R.O. 1960 — Designation of Parks.

O.Reg. 388/66 — Amending Reg. 498 of R.R.O. 1960 — Designation of Parks.

THE PUBLIC LANDS ACT

O.Reg. 208/66 — Amending Reg. 524 of R.R.O. 1960 — Sale of Public Lands.

O.Reg. 353/66 — New — Restricted Areas — Kenora, Patricia Portion.

THE WOODLANDS IMPROVEMENT ACT, 1966

O.Reg. 244/66 — New — General.

Orders-in-Council Recommended by the Minister of Lands and Forests during the year 1966-67

THE ALGOMA CENTRAL AND HUDSON BAY RAILWAY COMPANY ACT, 1941

Numbers of Orders-in-Council: 3460/66

THE CROWN TIMBER ACT

Numbers of Orders-in-Council:

1441/66	2629/66	3564/66	4730/66
1444/66	2630/66	3644/66	4731/66
1450/66	2631/66	3645/66	4798/66
1453/66	2632/66	3651/66	4847/66
1664/66	2648/66	3694/66	4853/66
1670/66	2649/66	3783/66	4857/66
1673/66	2751/66	3784/66	4869/66
1732/66	2752/66	3870/66	4946/66
1757/66	2826/66	4003/66	4948/66
1874/66	2832/66	4004/66	4998/66
1918/66	2833/66	4044/66	5026/66
1919/66	2834/66	4045/66	5064/66
1920/66	2839/66	4050/66	5065/66
1921/66	2848/66	4051/66	5135/66
1922/66	2849/66	4054/66	5160/66
1923/66	2850/66	4055/66	5186/66
1924/66	2861/66	4115/66	5240/66
2060/66	2869/66	4116/66	5328/66
2064/66	2870/66	4139/66	5329/66
2065/66	2926/66	4140/66	5330/66
2114/66	2930/66	4141/66	5337/66
2159/66	3048/66	4142/66	5339/66
2161/66	3049/66	4149/66	5340/66
2165/66	3056/66	4150/66	5406/66
2166/66	3057/66	4319/66	5407/66
2229/66	3103/66	4328/66	5409/66
2287/66	3104/66	4334/66	5484/66
2337/66	3122/66	4337/66	4/67
2510/66	3133/66	4418/66	5/67
2512/66	3134/66	4439/66	6/67
2525/66	3209/66	4445/66	151/67
2534/66	3211/66	4462/66	152/67
2535/66	3212/66	4529/66	153/67
2536/66	3246/66	4532/66	304/67
2540/66	3247/66	4541/66	315/67
2561/66	3251/66	4562/66	319/67
2566/66	3252/66	4567/66	355/67
2568/66	3317/66	4600/66	356/67
2607/66	3322/66	4611/66	358/67
2608/66	3323/66	4617/66	359/67
2609/66	3324/66	4653/66	446/67
2610/66	3325/66	4654/66	448/67
2611/66	3326/66	4677/66	624/67
2612/66	3351/66	4678/66	716/67
2613/66	3374/66	4683/66	717/67
2623/66	3388/66	4684/66	719/67
2624/66	3406/66	4685/66	903/67
2625/66	3409/66	4686/66	1018/67
2626/66	3461/66	4697/66	1144/67
2627/66	3464/66	4698/66	
2628/66	3499/66	4699/66	

THE EXECUTIVE COUNCIL ACT
Numbers of Orders-in-Council: 4336/66; 1211/67.

THE GAME AND FISH ACT, 1961-62
Numbers of Orders-in-Council:

3050/66	3568/66	4595/66	4922/66
3214/66	3586/66	4599/66	775/67
3313/66	4240/66	4692/66	913/67
3407/66	4555/66	4848/66	

MISCELLANEOUS
Numbers of Orders-in-Council:

1474/66	3311/66	4296/66	742/67
3172/66	3681/66	4417/66	

THE MUNICIPAL ACT
Numbers of Orders-in-Council:

1738/66	1763/66	2614/66

THE ONTARIO NORTHLAND TRANSPORTATION COMMISSION ACT
Numbers of Orders-in-Council: 4336/66

THE PROVINCIAL PARKS ACT
Numbers of Orders-in-Council:

2562/66	4732/66	5188/66

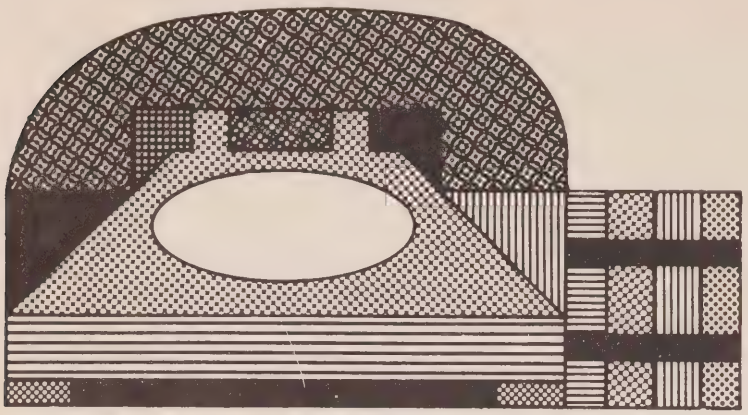
THE PUBLIC LANDS ACT
Numbers of Orders-in-Council:

1443/66	2615/66	3806/66	5353/66
1446/66	2666/66	3808/66	5482/66
1448/66	2748/66	3930/66	5483/66
1633/66	2830/66	3945/66	132/67
1635/66	2873/66	4046/66	224/67
1896/66	2927/66	4262/66	311/67
2069/66	2929/66	4530/66	318/67
2072/66	2941/66	4559/66	588/67
2083/66	2943/66	4598/66	589/67
2339/66	3021/66	4601/66	884/67
2341/66	3173/66	4613/66	923/67
2344/66	3265/66	4700/66	1062/67
2567/66	3310/66	4808/66	1165/67
2571/66	3316/66	4867/66	1200/67
2614/66	3682/66	5343/66	

THE SURVEYORS ACT
Numbers of Orders-in-Council: 2734/66

THE WOODLANDS IMPROVEMENT ACT
Numbers of Orders-in-Council: 2854/66

OPERATIONS BRANCH



OBJECTIVES

1. To promote public understanding of Department activities and objectives in the management of Ontario's renewable, natural resources.
2. To develop and promote good safety practices in forest work, in recreational activities on public lands and waters, and in all Department operations.
3. To effect efficiency in purchasing and in other, assigned services performed for branches and field offices.

ORGANIZATION

Operations Branch is divided into six sections with duties and responsibilities as follows:

Office Management: Inventory of major equipment; licensing of boats; production of circulars and bulletins; Crown land records and microfilming; uniform records and issues.

Purchasing: Purchasing of equipment, supplies and services; filling requisitions; leases and rentals; arrangements for travel and conferences.

Central Supply Warehouse: Receipt, security and distribution of equipment, supplies, uniforms and printed material; duplicating and collating of forms, letters, bills and reports; and distribution of licences and publications.

Conservation Information: Publications for public and special groups; weekly and special press releases; articles and background material for outside agencies; display and classified advertisements; photo, slide and cut services; reference library and clipping service; and supply of information to public.

Conservation Education: Display material for Department exhibits; production and purchase of motion films for general showing and for television; film supply service; program material for radio and television; lecture service.

Accident Control: Administration of The Loggers' Safety Act; Hunter Safety Program; safety program in Provincial Parks; staff safety; first aid program; and Workmen's Compensation.

PURCHASING SECTION

Supplies such as office needs, stationery and purchases were stored in quantities based on consumption rates in the warehouse and shipped upon requisition. Equipment and larger supplies such as trucks, boats, hose, furniture and chemicals etc., were purchased on requisitions from field offices and shipped directly to destination.

Requirements of all ten Branches were either supplied from warehouse stock or purchased directly as applicable.

OFFICE MANAGEMENT SECTION

Inventory of major equipment belonging to the Department, including trucks, cars, boats, canoes, power plants, shop equipment, tools, fire hose, outboard motors and office machines etc., was conducted.

Circulars and bulletins required by the Department were processed and distributed after approval by the Circular Board. Circulars and bulletins are revised annually.

There are 1,380 on the staff who wear the Department's uniform, including seasonal Parks staff. Requirements are included in the estimates for the coming fiscal year.

Records pertinent to all Crown lands of the Province are housed in Records Office. Duties performed included assembly, indexing and classifications of all incoming correspondence, and compiling and distribution of new files.

Communication with the Federal Department of Transport for the purpose of licensing Department boats was maintained. Some marine units of the Department require only a licence number, while others require registration certificate.

Various special assignments were also carried out.

CENTRAL SUPPLY WAREHOUSE SECTION

Stockroom: In the course of the fiscal year, supplies and equipment shipped by the Section amounted to 244 tons. In the same period, the Section received a total of 348 tons. Shipments were made by express, freight, transport and mail, and by internal supply to Department offices.

Duplicating, collating and distributing: Forms, reports, booklets, letters, circulars and bulletins, many of which are continuously being revised, were produced. Collating and distribution were as follows:

Information bulletins	71,410
Circulars	21,875
News releases	176,800
Extracts from Fishery Regulations	9,949
Summary of Fishing Regulations	819,000
Summary of Hunting Regulations	740,000
Game and Fisheries Act	26,091
Commercial Fishing in Ontario	57,204
Safety "Bits and Pieces"	98,941
Miscellaneous stapling and distribution	260,251
Total	2,281,501

Licence issuing: Thirty types of hunting, angling, bait fish, roll net, dip net, frog, guide, trapping, trap-line and dog licences were issued to licence issuers and District offices. The number of licences prepared and checked for mailing and express totalled 1,756,000 and were forwarded on 15,233 invoices to more than 3,000 issuers. 168,900 Provincial Park annual vehicle permits, 378,000 daily permits, 304,900 campsite permits and 290,500 fur seals were distributed.

Uniforms: The Department's uniform stock apparel was carried out and shipped to personnel as authorized by requisition.

CONSERVATION INFORMATION SECTION

During the past fiscal year, the Section worked through many media to disseminate information on the protection and management of the renewable, natural resources under the Department's administration.

Releases

Every week, the Lands and Forests news release circulated Department news and regulations and informed opinion in a form easily adapted by outside agencies. The mailing list of 3,500 included all newspapers, broadcasting stations and outdoor writers in Ontario, as well as magazines, trade papers, forest industries, conservation groups, and hunters' and anglers' clubs and associations. Ontario's tourist trade was assisted by the use of news release material by writers and commentators outside the Province. Each release carried a list of coming events of interest to recreational,

scientific and industrial groups in fields touching on the Department's administration. The French translation of the news release had a weekly circulation of 155.

News of more than normal urgency was supplied directly to important news outlets by press releases.

Special appeals were prepared for news media in season to enlist public support of Lands and Forests programs, principally in forest fire prevention and hunter safety.

Editorial services for outside agencies increased the concentration of conservation messages. Articles and background material were prepared on request. Speech material was prepared for Department personnel invited to address public meetings.

Services

The Photograph Library loaned 9,500 black-and-white prints and 1,000 colour transparencies to newspapers and magazines during the year. Section photographers took photographs on assignment and supplied prints from the darkroom at short notice. Sets of slides or prints were supplied on request to illustrate lectures. The library now has 35,000 negatives and 4,700 colour transparencies.

During the year, 35,300 answers were returned by mail to persons requesting information on Crown lands, outdoor recreation, nature study, forest industry and forest tree planting. In addition, numerous requests were answered by telephone.

The Reference Library circulated periodicals and press clippings.

To call for tenders on timber cutting, etc., 228 advertisements were placed in 46 newspapers during the year.

*Publications, 1966-67

FISH AND WILDLIFE

Summary of the Ontario Fishery Regulations
Summary of the Ontario Hunting Regulations
Summary of the Ontario Regulations Which Apply to Trapping and Fur-Dealing
The Game and Fish Act and the Ontario Fishery Regulations
The Deer Hunt in Ontario
The Moose Hunt in Ontario

OUTDOOR RECREATION

The Scent of Death
Instructors' Guide in Hunter Safety Training
Why Hunter Safety Training? (Revised)
So You Want to Go Camping? (Revised)
How to Survive in the Woods (Revised)
Arrayed-in-Wampum ($2.50)

PROVINCIAL PARKS

Provincial Parks of Ontario (map folder)
Canoe Routes of the North Georgian Bay Recreational Reserve
Canoe Routes of Quetico Provincial Park (Revised)
Game Fish and Fishing in Algonquin Provincial Park
Check-List of Birds, Lake Superior Provincial Park
Check-List of Mammals, Lake Superior Provincial Park
Check-List of Trees, Shrubs and Woody Vines, Pinery Provincial Park
Check-List of Ferns, Fern Allies and Herbaceous Flowering Plants, Pinery Provincial Park
Check-List of Mammals, Rondeau Provincial Park (Revised)
Check-List of Fishes, Amphibians and Reptiles, Rondeau Provincial Park (Revised)
Check-List of Trees, Shrubs and Woody Vines, Rondeau Provincial Park (Revised)
Check-List of Ferns, Fern Allies and Herbaceous Flowering Plants, Rondeau Provincial Park (Revised)
Check-List of Birds, Algonquin Provincial Park (Revised)

FORESTS

Forestry Assistance to Private Landowners in Ontario
Some Aspects of the Christmas Tree Industry in Ontario
Directory of Primary Wood-Using Industries in Ontario
Manual of Scaling Instructions (Revised)
Manual of Seed Collecting (Revised)
Photographic Interpretation of Tree Species in Ontario (Revised)
Midhurst Forest Station (Revised)
St. Williams Forest Station (Revised)
Tower Jack (Revised)
The Forest Fires Prevention Act
The Crown Timber Act, etc.

ADMINISTRATION

Annual Report of the Minister of Lands and Forests
Part I — Detailed
Part II — Highlights
A Statistical Reference of Lands and Forests Administration
Ontario Forest Technical School (Prospectus)
Ontario Forest Technical School (Information Brochure)
Ontario Forest Technical School Year Book
Ontario Junior Forest Ranger Program
Eight Weeks in the Woods (Junior Rangers)
Manual of Instructions to Permit Issuers in Provincial Parks
Manual of Instructions to Issuers of Angling and Hunting Licences
Procedure in Reporting Workmen's Compensation Board Costs
The Loggers' Safety Act

*Technical papers and management reports are not included.

"RENEWING NATURE'S WEALTH"

To place important facts on record before they were lost to knowledge or contemporary interpretation, the Department had long planned to publish a history of natural resources and their administration from the earliest days. Preliminary research work was done by Branches under the direction of the History Committee formed in 1963. The committee was guided by the advice of Professor J. M. S. Careless, Head of the History Department, University of Toronto.

Early in 1965, the Department contracted for the services of the author, Richard S. Lambert, M.A. (Wadham College, Oxford), the winner of the Governor-General's medal for juvenile literature in 1949 and the author of 30 books including five history texts approved for use in Ontario schools. Mr. Lambert shared the authorship with Paul Pross, M.A. (Queen's), Ph.D. (Toronto). Research work was assisted by a team of graduate history students from the University of Toronto.

"Renewing Nature's Wealth, A Centennial History of the Public Management of Lands, Forests and Wildlife in Ontario" was presented to the public in June, 1967, by Prime Minister John P. Robarts.

The 648-page volume was printed by Hunter Rose Company Limited, Toronto. The bulk of the 10,000 press run was distributed through book stores at $9.50 per copy by Copp Clark Publishing Company, Toronto.

CONSERVATION EDUCATION SECTION

Conservation Education Section conducts an educational program which consists of the type of appeals calculated to attract public interest and explain in easily understandable terms the need for the wise use of renewable, natural resources.

VISUAL EDUCATION

The Sections' film library contains 233 titles, with two or more prints of many of the titles. All films are available for loan to field offices upon request. During the year approximately 1,350 films were shipped to field offices in answer to requests received. Each district has its own projector and it has access to regional film libraries as well as head office film library.

The Section loaned 16mm. motion picture projectors, 35mm. slide projectors, screens and films to Provincial Parks offering an interpretative program to the public during the summer months.

During the year, the following films were added to head office and field film libraries:

Black Duck	Squeak, the Squirrel
Boreal Forest	The Pond
Canada Goose	The Tree
Conservation & The Balance of Nature	Trout Stream
	Whitethroat
Deer Family of North America	Wonders in a Country Stream
Forests For The Future	Wood Duck Ways

Several thousand feet of motion picture film are available and being used by television outlets in Ontario. In addition, a set of 15 one-minute television shorts entitled "Do You Know?" were made available to the television stations. Enough stock film footage was taken to assist in making a start to a new nursery film entitled "Seeds to Trees".

RADIO AND TELEVISION

Radio and television stations throughout the Province have been most generous in their donations of free time to the Department, and Districts regularly take advantage of these opportunities to reach the public. In addition to radio programs, several Districts now conduct regular, live television broadcasts of their own. This Section also supplies Districts with films for use on television.

EXHIBITS

Visual conservation appeals are featured in the Department's exhibits at many of the shows and fairs in Ontario. The major exhibits handled through this Section were as follows:

Canadian National Exhibition, Toronto: The exhibit in the Ontario Government Building included sport fishes, snakes, animals and birds of Ontario with educational material on each. Other displays featured available lands for recreation, hunter safety training, a scale model of a burning forest fire showing the methods of forest fire fighting and the equipment used, a scale model of a typical Provincial Park and a display featuring the story of "seed to tree." The Conservation Poster Contest for elementary school children from six to 14 years of age was held again this year. A Grand Prize of $100.00 was presented for the best poster. First, second and third prizes, in each of three age groups, in the amounts of $50.00, $25.00 and $15.00 were awarded. 30 "Honourable Mentions", ten in each age group, were presented with books.

Canadian National Sportsmen's Show, Toronto: This exhibit featured the fish and wildlife pavilion. Snakes, surveys, forest protection, parks, hunter safety, fur and timber were also displayed.

Central Canada Exhibition, Ottawa: Display consisted of animals, birds and the "Seed to Tree" story.

Royal Agricultural Winter Fair, Toronto: The largest of our displays at the Royal so far which featured the story of reforestation from the initial stages — i.e., cones, seeds, seedlings, through shipping to the woodlot owner and the proper planting methods. Also featured this year was the animal section of the pavilion, 16 cages of animals and birds, and a hunter safety display.

Full co-operation was also given to District Offices participating in sportsmen's shows and agricultural fairs such as the Western Fair at London, the International Plowing Match at Seaforth, the Timmins Sportsmen's Show and the Chatham Sportsmen's Show.

LECTURE TOURS

The Department kept in touch with the public through fish and game association, schools, church groups, service clubs and youth organizations. Illustrated lectures were given on all aspects of the Department's work. Much progress was made with programs at boys' and girls' summer camps in the Georgian Bay area.

The Department's head office and field staff presented 2,576 lectures to audiences totalling 209,502 during the past fiscal year. Ontario Forestry Association personnel gave 1,069 lectures in meetings attended by 29,965.

ACCIDENT CONTROL SECTION

THE LOGGERS' SAFETY ACT

Inspection of logging operations and investigation of accidents have been carried out by the Department's 10 Accident Control officers.

During 1966, approximately 824 inspections of logging operations were made and it was found necessary to apply seven "stop work" orders and many warnings for infringements of the said Act. Accident Control officers in the field attended approximately 96 meetings having regard to the application and enforcement of the Act, and to stress the value of safety education in the logging industry. During the year 15 fatalities were reported and investigated, plus 2,288 non-fatal accidents.

A program of safety education, including safety awards and seminars for foremen and supervisors in the logging industry, has been proposed and is being considered. By this means it is hoped that the accident frequency rate in this industry will be reduced.

HUNTER SAFETY TRAINING PROGRAM

Designed to teach hunters safe and proper gun handling, this program was initiated in the fall of 1957 on a voluntary basis. Game and fish clubs agreed to supply instructors and teach the course to young hunters. In remote areas where there are no clubs, the teaching is the responsibility of the Department.

Applications for instructors are screened and approved at District offices. Training material is then sent, followed by a brassard from head office. Instructors' workshops are held frequently, where problems can be solved, policy explained and new teaching methods demonstrated. Available to clubs on loan are films, slides, and defective firearms for use in classroom demonstrations. District offices supply instructors with manuals, literature, registration cards, report cards, certificates of competence, safety posters, etc. Instructors are covered by liability insurance for personal and property damage.

Game and fish clubs instruct approximately 54 per cent of the students, the remainder being instructed in organizations such as Boy Scouts, service clubs, cadet corps, Canadian Legion, etc.

In 1966, 19,342 students graduated compared to 17,577 in 1965, making a total of 121,953 graduates since the program was commenced in 1957.

Statistics of hunting accidents show a total of 130 (13 fatal, 117 non-fatal) for 1966.

SAFETY IN PROVINCIAL PARKS

Accident Control officers make frequent inspections during the season in Provincial Parks reporting on unsafe conditions and hazardous objects that might prevail when people congregate. The findings are brought to the attention of the park superintendent or District Forester for remedial action. The safety section is not responsible for the beach patrol maintained by the Parks Branch.

During the months July to September, the Department sponsored a "Water Safety Demonstration" program presented by the Ontario Safety League. The demonstrations were given in most of the 92 provincial parks and were viewed by more than 150,000 during 1966.

WORKMEN'S COMPENSATION

Workmen's Compensation costs and the number of claims submitted have increased for the fiscal year. The total number of compensable claims was 588, an increase of 21 over that for the previous fiscal year. Total cost of Department claims was $171,315.47, an increase of $26,642,76. Average cost per claim was $159.00, an increase of $41.00 per claim.

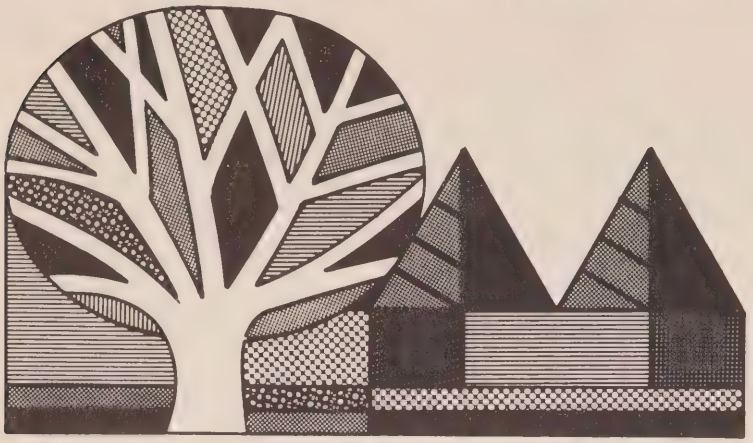
Increased costs can be attributed mainly to higher wages being paid in 1966-67, upon which workmen's compensation was computed. Current medical aid and compensation increased by $18,928.52. Pensions, and medical aid plus compensation pertaining thereto, increased by $5,567.63. There were 20 high cost claims totalling $43,634.78, accounting for 53 per cent of the total cost of medical aid and compensation.

Cost of fire fighting increased by approximately $600.00.
A greater number of junior rangers were employed. Injury claims increased by 35, and cost of all junior ranger personnel increased by $6,905.78.

Average number of employees increased by 461 but .5 per cent fewer employees were injured.

There was one death in the fiscal year, but the deceased was single and a pension was not required. Three new pensions commenced in the fiscal year and were made retroactive to 1965.

FOREST PROTECTION BRANCH



OBJECTIVES

1. To protect Provincial forest lands against damage by fire and pests to the degree warranted by requirements for wood products, recreation and other public needs.
2. To protect life and property from forest fires.
3. To encourage and promote the protection of privately-owned forest lands.
4. To provide flying and communication services and to administer the construction and equipment program for the Department.

ORGANIZATION

Forest Protection Branch is divided into two Sections and their subordinate units with duties and responsibilities as follows.

FOREST PROTECTION

Forest Fire Control: Administration of The Forest Fires Prevention Act; organization of fire districts and the fire warden system; supervision of fire control planning and preparedness; fire prevention programs including a system of travel, fire and work permits; co-operative fire prevention and control agreements with Municipalities, Railways, Forest Industries and other agencies; detection of forest fires and fire danger warnings; training of staff and co-operators in fire control techniques; prescribed burning; co-ordination of fire suppression, movement of resources and emergency arrangements.

Forest Pest Control: Prevention and control of damage by insects, diseases and other pests affecting forests under Department management; advisory services.

Communications: Planning, installation and operation of radio, telephone and teletype services for fire control and other Department requirements; construction of specialized communication equipment.

Plant and Equipment: Planning, budgeting and supervision of Departmental construction, equipment and sign programs; inventory of Department establishments; liaison with Department of Public Works; prescribing equipment complements, maintenance and replacement standards; vehicle records, licensing and insurance.

AIR SERVICE

Operates a fleet of aircraft to meet flying requirements of the Department and special needs of other Government Departments; selection and training of pilots and air engineers; deployment of aircraft and crews; establishment of air bases; fuel distribution and caches; selection of aircraft equipment and development of special equipment; leasing and disposition of helicopters and other aircraft; checking pilot proficiency and the overhaul and maintenance of aircraft.

FOREST FIRE PROTECTION

Forest Fire Control

THE 1966 FIRE RECORD

During the 1966 season, 1,921 forest fires occurred in Ontario, burning 14,415 acres. Although this is the fifth highest number of fires recorded since the year 1917, the acreage burned was the fourth lowest over the same period of time.

The average area burned per fire of 7.5 acres is the second lowest recorded and only surpassed by the 1959 average fire size of 5.0 acres.

STATISTICS

The month of July shattered all records since 1936 for the most fires occurring in any one month. A total of 906 fires started during this month.

The trend to higher fire occurrence continued in 1966. The average incidence over the past five years of 1,674 fires is 28 per cent greater than the previous five year average of 1,304 fires.

FIRE PREVENTION

On July 29th 1966, a historical plaque was unveiled near Matheson, commemorating the 50th anniversary of the forest fires which ravaged Matheson and other neighbouring communities during July 1916. This program was carried out in co-operation with the Ontario Forestry Association. The Matheson fire of 1916 is the worst in recorded Canadian history, taking a total of 223 lives.

FIRE DETECTION

As part of a fire detection improvement program, further infrared detection trials were conducted in 1966. Unfortunately, the modified system was not available for field testing until late in August of 1966. The system was mounted on the wing-tip of a Turbo-Beaver aircraft and test-flown for a two week period in Northwestern Ontario. One wildfire (approximately 200 acres) was flown and mapped while increasing in size and during the mop-up and patrol stage. The film results were good. In addition, a lightning fire was discovered for the first time by this system before being reported by any other reporting agency. It is planned to operate this unit for the complete 1967 fire season for further evaluation.

An aircraft detection study, initiated in Sault Ste. Marie District in 1963, was expanded to include two additional areas of approximately 2,000 square miles each in the vicinity of Kenora and Temagami. Within the two new study areas the regular detection system functioned normally and independantly from the aircraft system. Although results were favourable, additional studies are required before the system can be considered operational.

TRAINING

Some 260 Department personnel have now completed the intensive five-week fire suppression instructor training course. Graduates of this course carried out individual District and Division training programs. Reduced fire losses and improved management of fire fighting operations have been experienced as a result of the program.

Approximately 300 Indians received a 10-day fire suppression training course. This force was organized into 10 or 15-man crews, and maintained at key headquarters across the Province for the duration of the fire season.

A short training course was developed on law enforcement and fire investigation procedures as they apply to the Forest Fires Prevention Act.

One five-day introductory course was conducted for 12 field supervisory staff on "Synoptic Scale Weather Phenomenon". The course was designed to familiarize personnel with weather phenomena as they are related to local fire conditions.

A training film was produced during 1966 covering the setting up of motor pumps and handling of hose by nozzle crews.

The preparation of a programmed learning booklet on the subject of "Fire Behaviour" was initiated during the latter part of 1966. This approach to training allows each person to learn at his own individual rate. Further applications of this technique will be considered after the initial effort is fully tested and assessed.

EQUIPMENT

During 1966, a combination sferics-radar system was used to plot lightning storm movement in northwestern Ontario. The objective was to delineate areas requiring intensified detection coverage. Results were encouraging and evaluation work with a full-time summer student and an improved sferics installation will be continued during 1967. This study will be tied in closely with evaluation work on airborne infrared detection equipment.

AIR OPERATIONS

The water bombing systems, designed late in 1965 for the Department by Field Aviation, is now completely operational. The system was designed to give the option of using plain water or "Gelgard" additive. Several Otters, equipped with the system, operated during the 1966 fire season and were very successful in their water drop operations. Test pattern analysis carried out by the National Research Council, Flight Research Section and Department of Lands and Forests personnel indicate a pattern of approximately 165 x 25 feet with a concentration of 5.2 gallons per 100 s.f. or an average of 0.1" over the pattern. Recovery was 75 per cent, which compares favourably with previous tests.

At the present time, a similar system is being produced for use in Turbo-Beaver aircraft and it is expected that 10 Otter and 15 Turbo-Beaver aircraft will be operational by the Spring of 1967. In addition, an integral float system will be developed and installed in a Twin Otter aircraft in 1967. The anticipated maximum load is about 400 gallons. This development greatly improves the performance of the smaller water bombing aircraft and eliminates the special water tanks that were formerly required.

An air operations study has been initiated to provide guidelines to the present and long term development of the Air Service. The type of aircraft, numbers, mix, deployment and management will be considered in the study.

PRESCRIBED BURNING

21 prescribed burns were carried out in 1966, covering a total of 4,535 acres. 19 of these burns were carried out in conifer logging slash. The object of the majority of the burns was to prepare the sites for planting, and at the same time reduce the hazard by the elimination of slash. One burn was carried out to prepare seedbeds for natural regeneration and three were conducted to eliminate fire hazards. Two experimental burns in hardwood were carried out as part of a continuing hardwood regeneration project.

GENERAL DEVELOPMENTS

The provincial nozzle crew competition was held again in 1966 with much enthusiasm shown by field staff. This year's award was won by a crew from White River district.

Forest Pest Control

SURVEYS

Each year this Department participates in the Ontario portion of the Canada-wide forest insect and disease survey of the Federal Government. Detailed information concerning the occurrence and distribution of specific insects and diseases is contained in the survey's annual report. Attention is drawn here to a few well-known pests of special interest.

For the third consecutive year, there have not been any serious spruce budworm infestations in Ontario, although the insect was found without difficulty in many locations. A few scattered light infestations occurred across northern Ontario, and the moderately heavy infestation of long standing in a white spruce plantation in the Uxbridge Forest persisted in 1966.

The jack pine budworm, a close relative of the spruce budworm, which has not been a serious problem in Ontario for almost 30 years, occurred in epidemic numbers in 1966 in the western part of the Kenora and Fort Frances Districts, and at scattered locations as far east as Manitoulin Island. This insect has caused noticeable defoliation in parts of northwestern Ontario for the past few years, but the increases in 1966 may be more significant.

The most spectacular insect in many parts of Ontario's forest for the past five years has been the forest tent caterpillar. In 1966, this insect declined in Ontario as a whole. Partly as a result of unfavourable spring weather, the infestation virtually collapsed in northwestern Ontario and in the Kapuskasing District, where it had covered 35,000 square miles the previous year. In central and southern Ontario, the infestation occurred in widely scattered locations from Sault Ste. Marie to Kemptville, and there was a small increase in the total area affected. Epidemics of the insect appear every 10 or 12 years, but very little permanent damage is done to the deciduous trees.

Populations of the larch sawfly continued to increase in northern Ontario and to decline in the northeastern and southern portions of the Province. In keeping with rising populations of the insects on the Prairies, defoliation was most noticeable in the Kenora and Fort Frances Districts. In southern Ontario, high populations of the insect were confined mostly to plantations of European larch.

The European pine sawfly — an insect native to Europe which entered Ontario via Windsor about 1940 — continued to spread and increase in severity. The insect feeds principally on Scots, red and jack pines. During 1966, the eastern boundary of its occurrence extended eastward about 10 miles and is now a line roughly from Waubaushene to Orillia, Lindsay and to Brighton on Lake Ontario. An isolated outbreak also exists in Belleville. Last year, the insect was reported for the first time in Manitoulin Island. A special effort is being made to control its numbers on the island in order to delay spread to the mainland.

The most noticeable tree disease in Ontario is the Dutch elm disease. The range of occurrence of the disease remained as reported in 1965, but the rate of mortality in elms increased greatly in many localities of southern Ontario.

For several years, young plantations of red and jack pines in the Kirkwood Forest have suffered high mortality and establishment of young stands has been very difficult. In 1962, the destructive organism responsible for this problem was identified as the Scleroderris canker. High disease losses attributed to this canker in several plantations, as well as in the Thessalon and Swastika nurseries, prompted a special effort in 1966 to determine the extent of the disease in the Province. It was found to occur frequently in young red and jack pine plantations in north-central and

north-eastern Ontario, but to be practically absent from northwestern and southern Ontario. Further studies will be conducted to determine the potential impact of the disease on the reforestation program.

CONTROL

For the past few years, the forest insect causing greatest economic damage has been the white pine weevil. Control methods during 1966 involved spraying with knapsack sprayers, using helicopters and hand clipping and burning infested leading shoots. A total of 2,800 acres of young white pine were treated.

Slightly over 4,200 acres of plantations were sprayed from the ground and air with chemicals for control of sawflies — principally the red-headed pine sawfly and the European pine sawfly. An insecticidal virus was also sprayed to control the European pine sawfly. In an effort to avoid hazardous side-effects of DDT in rural areas, especially among fish, the Department initiated and co-ordinated a project with private tree farmers using the insecticide phosphamidon, applied by helicopter. Results were satisfactory and the method is expected to become standard practice.

About 650 acres of sod-covered sites were treated for control of white grubs, as well as small acreages of similar sites for control of mice, where these pests threaten the survival of newly planted trees.

The major tree-killing disease in the forests of Ontario is the blister rust of white pine. A substantial disease-control program, which is part of the broader intensive management of white pine, has been in progress for many years. The disease is controlled by using the herbicide 2,4,5-T to kill the obligate host plants, wild currants and gooseberries, in the immediate vicinity of the pines. In 1966, more than 3,300 acres of high-value young pine stands were protected against the blister rust in parts of the Sault Ste. Marie, North Bay, Tweed, Kemptville and Lake Huron Districts.

The relatively new disease of plantations in southern Ontario — fomes root rot — is now prevented through the application of a chemical to the freshly cut surface of stumps during thinning operations. About 500 acres of thinnings were treated in 1966.

In an effort to provide additional skilled labour for removal of diseased elm trees, the Department initiated and co-ordinated an interdepartmental project to train Indian young men for this work, 55 of whom completed the course. Any further training projects will be initiated only after a complete evaluation of the results achieved.

Communications

A small increase (eight per cent) was recorded in radiograms sent and received over the radio system in 1966, with 117,845 messages totalling 5,470,564 words being sent. Seven more VHF radio installations were added to the system located at Nipigon, Copper Lake, Kingston, Alexandria and Lanark and bringing the total to 177 points served.

Major equipment acquisitions included 30 VHF mobile radiotelephone installations and 50 VHF Walkie-Talkies. A start was also made on a program to install VOR electronic navigation equipment in each aircraft of the Department's fleet of 41 machines. In addition, complete electronic communication and navigation installations were effected in nine new Turbo-Beaver aircraft.

The 1966 inventory of 2,605 pieces of two-way radio communications equipment comprised:

- 352 Lookout Tower VHF radiotelephones.
- 579 Mobile VHF radiotelephones.
- 15 Patrol vessel radiotelephones.
- 1,218 Portable radio telephones of all types and power outputs, both HF and VHF.
- 320 Fixed location ground station radiotelephones of all types and powers, both HF and VHF.
- 41 Aircraft Radio Installations (4 systems in each aircraft).
- 60 Portable VHF aircraft radiotelephones for installation in other than Government aircraft.
- 20 Aircraft Ground Hailers.

Table 1
NUMBER OF FOREST FIRES AND AREA BURNED BY DISTRICTS

	1962		1963		1964		1965		1966	
District	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres
Sioux Lookout	59	1,300	92	14,665	113	10,066	59	1,031	121	700
Kenora	50	260	171	836	120	1,767	88	694	120	796
Fort Frances	10	3	62	2,390	40	2,804	21	9	46	27
Port Arthur	46	106	92	2,564	99	556	48	2,474	93	257
Geraldton	31	529	70	944	24	1,220	32	9,582	46	1,219
Kapuskasing	30	1,566	53	1,019	24	93	15	18	15	246
Cochrane	26	1,230	41	1,115	35	2,053	16	615	38	107
Swastika	41	790	46	885	23	304	21	213	49	2,461
Chapleau	23	26	26	28	10	366	8	9	21	8
Gogama	44	224	20	34	14	28	18	1,386	21	21
Sault Ste. Marie	80	384	121	638	95	413	29	39	27	23
Sudbury	332	4,459	382	16,586	305	1,943	234	1,569	124	348
White River	22	78	40	10,577	16	53	13	29	417	6,011
North Bay	141	1,241	155	1,367	110	511	104	391	139	405
Parry Sound	258	349	190	993	268	740	177	305	227	568
Pembroke	128	460	102	701	193	4,512	110	250	121	160
Tweed	106	560	120	556	167	316	136	748	141	649
Kemptville	—	—	4	5	16	157	19	389	9	29
Lindsay	57	200	78	209	120	132	59	152	95	97
Lake Huron	10	14	4	4	9	35	5	—	20	53
Lake Simcoe	27	25	16	22	28	55	6	1	31	230
Totals:	1,521	13,804	1,885	56,138	1,829	28,124	1,218	19,904	1,921	14,415

Table 2
NUMBER OF FOREST FIRES AND AREA BURNED OVER BY MONTHS

Months	1962 Fires	1962 Acres	1963 Fires	1963 Acres	1964 Fires	1964 Acres	1965 Fires	1965 Acres	1966 Fires	1966 Acres
March	—	—	3	10	—	—	—	—	—	—
April	135	1,302	311	3,321	164	4,212	96	547	81	289
May	249	1,715	227	13,593	395	8,630	426	2,621	316	5,801
June	248	4,178	266	27,030	337	6,980	296	11,613	233	4,570
July	466	2,686	550	7,113	620	7,478	192	2,029	908	2,671
August	296	3,618	118	125	141	101	191	3,067	215	615
September	99	200	86	108	47	21	8	2	113	150
October	23	93	290	3,490	65	252	7	24	54	319
November	5	12	34	1,348	60	450	2	1	1	—
Totals	1,521	13,804	1,885	56,138	1,829	28,124	1,218	19,904	1,921	14,415

Table 3
CLASSIFICATION OF FOREST FIRES BY SIZE

	1962 No.	1963 No.	1964 No.	1965 No.	1966 No.
¼ acre and under	670	693	845	572	998
Over ¼ to 10 acres	744	955	829	560	834
Over 10 to 100 acres	84	198	122	70	70
Over 100 to 500 acres	17	30	22	13	14
Over 500 acres	6	9	11	3	5
Totals	1,521	1,885	1,829	1,218	1,921

Table 4
NUMBER OF FIRES BY MEANS OF DETECTION

	1963	1964	1965	1966
Fire Lookout Towers	620	611	417	560
Lands and Forests Aircraft	206	178	66	189
Commercial Aircraft	97	55	46	123
Private Aircraft	19	34	3	13
Lands and Forests Personnel	92	116	67	96
Other Provincial Government Employees	27	41	35	68
Public	824	794	584	872
Totals	1,885	1,829	1,218	1,921

Table 5
GENERAL CAUSES OF FOREST FIRES
(NUMBER OF FIRES AND ACREAGE — 1966)

	Fires	Acres
Lightning	539	4,122
Industrial — Logging	15	23
Industrial — Other	73	3,605
Recreation	719	2,324
Resident	223	878
Railways	117	666
Incendiary	18	473
Miscellaneous	205	2,305
Unknown	12	19
	1,921	14,415

Table 6
CAUSES OF FOREST FIRES
(NUMBER OF FIRES — 1966)

BY SOURCE OF IGNITION	Fires
Lightning	539
Smoking Material	510
Camp Fires	302
Grass Burn	33
Rubbish Burning	46
Unknown	28
Matches	153

Table 6 (Continued)

BY SOURCE OF IGNITION	Fires
Brush Burn	42
Garbage Dump Burn	48
Right-of-Way Burning	11
Brake Shoe	56
Diesel Locomotive	14
Steam Locomotive	—
Hot Box	—
Fusee	6
Tie Burning	6
Structural Fires	29
Power Line (Short Circuit)	10
Sparks from Chimney	2
Fireworks	35
Power Saw	4
Mechanical Equipment	16
Spark from Burner	2
Sawdust Pile Burning	4
Burning Bulldozed Piles	4
Explosives	2
Dumped Live Coals or Ashes	2
Miscellaneous (Known)	15
Prescribed Burning	2
Total	1,921

BY RESPONSIBLE GROUP	Fires
Lightning	539
Fisherman	256
Children	212
Car Passenger	125
Unknown	95
Berry Picker	107
Camper	77
Resident Rural	71
Hunter	40
Farmer	29
Private Cottager	47
Hiker	52
Resident Urban	17
Other Industrial Employee	12
R.R. Section Crew	11
R.R. Train Crew	62
R.R. Work Crew	10
Canoeist	4
Picnicker	21
Commercial Resort Owner	9
Guided Party	—
Train Passenger	23
Indian (on Reserve)	9
Timber Cruiser	—
Woods Industry Employee	14
Land Survey Party	2
Trapper	—
Prospector	1
Mining Employee	8
Pipeline Employee	1
Hydro Employee	21
Highway or Road Employee	3
Municipal Employee	11
Telephone Co. Employee	—
Military	1
Miscellaneous	24
L. & F. Employee	3
Other Provincial Government Employee	—
Federal Government Employee	2
Youth Groups	2
Total	1,921

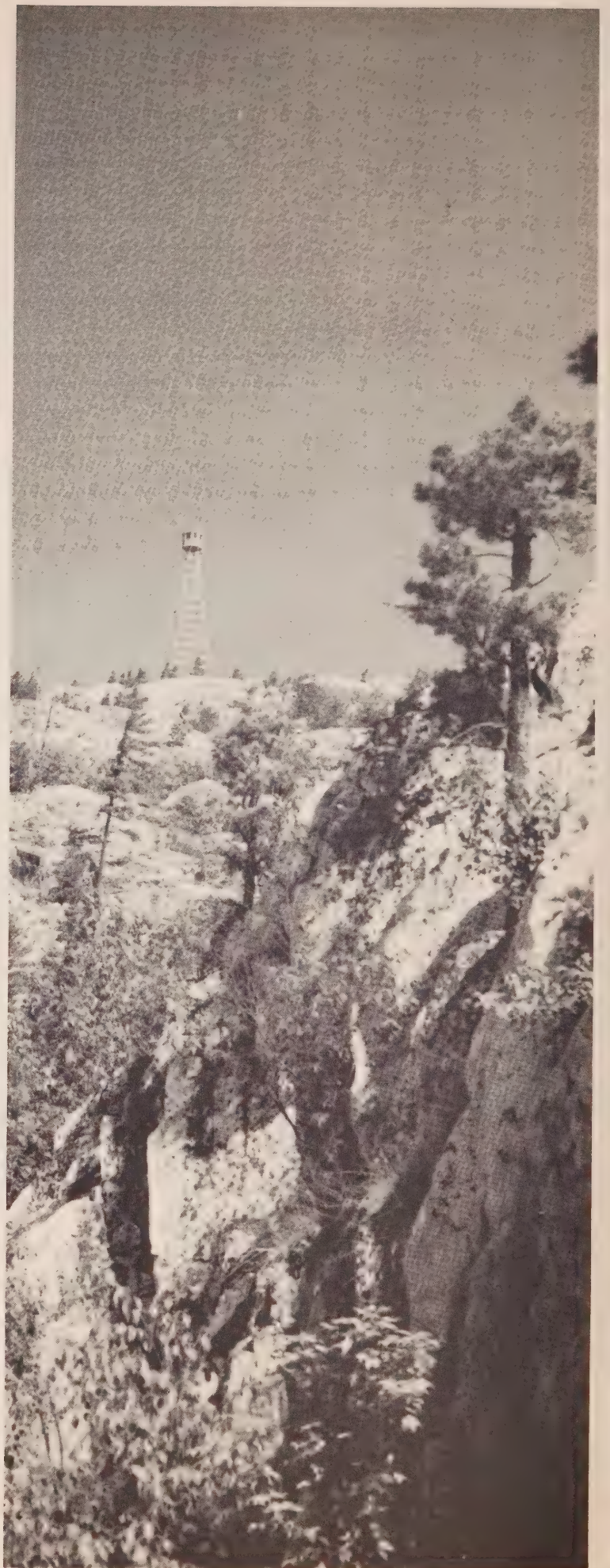


Table 7
STATEMENT OF FIRE DAMAGE — 1966

	MERCHANTABLE FOREST Area Cu. Ft.	MERCHANTABLE LOSSES $	IMMATURE LOSSES $	NON-FOREST LOSSES $	TOTAL LOSSES $
Sioux Lookout	394,798	$13,573.97	$ 4,215.00	$ —	$ 17.788.97
Kenora	56,163	2,182.00	4,770.00	—	6,952.00
Fort Frances	19,906	1,179.30	220.00	—	1,399.30
Port Arthur	6,053	310.36	553.03	3,100.00	3,963.39
Geraldton	268,520	9,614.60	3,137.50	—	12,752.10
Kapuskasing	7,055	282.20	150.00	14,314.00	14,746.20
Cochrane	85	3.40	163.25	2,900.00	3,066.65
Swastika	—	—	75.00	20,500.00	20,575.00
White River	—	—	12.50	—	12.50
Chapleau	513	9.80	20.50	68.75	99.05
Gogama	—	—	125.00	—	125.00
Sault Ste. Marie	500	16.50	3,208.33	500.00	3,724.83
Sudbury	41,237	1,973.04	6,422.06	1,446.25	9,841.35
North Bay	68,157	3,279.66	1,040.00	—	4,319.66
Parry Sound	2,000	100.00	2,177.58	275.00	2,552.58
Pembroke	—	—	167.50	—	167.50
Tweed	26,105	1,522.97	7,641.36	3,000.00	12,164.33
Lindsay	1,247	76.03	436.25	3,000.00	3,512.28
Kemptville	2,250	136.25	407.50	—	543.75
Hespeler	—	—	318.75	300.00	618.75
Maple	11,521	522.00	1,478.75	53.20	2,053.95
Aylmer	—	—	—	—	—
	906,110 cu. ft.	$34,782.08	$36,739.86	$49,457.20	$120,979.14

Table 8
FOREST FIRE SUMMARY

Year	Crown Acres	Private Acres	Total Acres	Total No. of Fires	Average Fire Size (Acres)
1925	132,481	57,062	189,543	1,149	165
1926	65,888	22,486	88,374	1,110	80
1927	22,772	12,970	35,742	924	39
1928	96,436	3,947	100,383	536	187
1929	608,750	16,893	625,643	1,550	404
1930	357,531	354,278	711,809	1,402	508
1931	105,866	32,421	138,287	1,851	75
1932	626,555	52,466	679,021	2,073	328
1933	325,034	24,924	349,958	1,919	182
1934	160,348	38,285	198,633	1,568	127
1935	183,179	67,483	250,662	1,309	191
1936	1,153,876	110,557	1,264,433	2,264	558
1937	201,887	22,859	224,746	1,453	155
1938	96,168	42,077	138,245	1,292	107
1939	26,089	3,009	29,098	961	30
1940	100,990	20,624	121,614	1,014	120
1941	271,793	394,754	666,547	1,265	527
1942	77,709	36,007	113,716	1,224	93
1943	33,465	19,352	52,817	624	85
1944	73,228	95,663	168,891	1,137	149
1945	17,997	30,513	48,510	966	50
1946	44,656	32,113	76,769	1,739	44
1947	38,093	45,939	84,032	1,393	60
1948	754,778	162,611	1,017,389	2,036	500
1949	40,593	19,472	60,065	1,834	33
1950	13,203	23,577	36,780	985	37
1951	96,662	4,581	101,243	904	112
1952	7,264	5,157	12,421	1,095	11
1953	44,519	14,290	58,809	1,520	39
1954	36,115	18,578	54,693	881	62
1955	370,948	25,475	396,423	2,252	176

Table 8
FOREST FIRE SUMMARY (Continued)

Year	Crown Acres	Private Acres	Total Acres	Total No. of Fires	Average Fire Size (Acres)
1956	221,822	4,390	226,212	1,017	222
1957	24,250	22,401	46,651	1,671	28
1958	25,544	11,108	36,652	1,558	24
1959	2,580	2,701	5,281	1,029	5
1960	29,190	2,196	31,386	956	33
1961	1,180,900	3,828	1,184,728	1,305	908
1962	7,583	6,221	13,804	1,521	9
1963	40,692	15,446	56,138	1,885	30
1964	22,463	5,661	28,124	1,829	15
1965	14,995	4,909	19,904	1,218	16
1966	8,453	5,962	14,415	1,921	6

AIR SERVICE SECTION

Nine De Havilland Turbo-Beavers and one Twin Otter were purchased to replace 10 piston powered Beavers which were sold by public tender.

The "Ontario Integral Float Water Bombing System" was installed in a total of 10 Otters and 15 Turbo-Beavers; two Otters and two Turbo-Beavers were also equipped with Gelgard dispensing systems. Development of the water bombing system in the Twin Otter is underway with the Aircraft expected to be operational by August 1967.

26 bases were in operation during the fire season. 12 of these bases provide year-round flying service necessary in resources management work. Total flying time for the year was 14,752:40 hours, total personnel and passengers carried 36,702. Total loads carried 13,200,064 pounds. 17 Mercy Flights totalling 25:15 hours were carried out. Five helicopters were leased from May 1st to September 30th to provide transportation in fighting fires.

The following tables provide further details on air operations:

Table 9
HOURS FLOWN AT OPERATING BASES 1966-67

BASE	HOURS FLOWN	TYPE OF AIRCRAFT
Algonquin Park	17:45	Beaver
Carey Lake	363:00	Beaver
Caribou Lake	325:45	Beaver
*Chapleau	334:50	Turbo Beaver and Beaver
*Fort Frances	563:35	Turbo Beaver
*Geraldton	811:30	Turbo Beaver, Beaver and Otter
*Gogama	604:05	Turbo Beaver
Kenogami Lake	359:25	Beaver
*Kenora	1,101:20	Turbo Beaver, Beaver and Otter
Lauzon Lake	319:55	Beaver
Nym Lake	246:05	Beaver
Parry Sound	352:10	Beaver
Pays Plat	365:00	Beaver
*Pembroke	710:15	Turbo Beaver and Otter
Pickle Lake	383:55	Otter
*Port Arthur	647:50	Turbo Beaver and Otter
Red Lake	299:10	Otter
Remi Lake	352:35	Beaver
*Sault Ste. Marie	1,253:40	Turbo Beaver and Otter
*Sioux Lookout	1,261:55	Turbo Beaver and Otter
*South Porcupine	504:55	Turbo Beaver and Otter
*Sudbury	815:10	Turbo Beaver and Otter
Temagami	384:55	Beaver
*Toronto Island Airport	993:50	Turbo Beaver, Twin Otter and Widgeon
Tweed	385:25	Beaver
White River	561:25	Beaver (2)
Air Service, General	433:15	Turbo Beaver, Beaver
	14,752:40	

*Denotes Year-Round Base

Table 10
HOURS FLOWN ON VARIOUS PHASES OF FLYING OPERATIONS 1966-67

	LANDS AND FORESTS	COMMERCIAL			
	Aircraft	Fixed Wing	Helicopters (Contract)	Helicopters (Others)	Totals
Fire Ranging (Detection, Suppression, Water Dropping)	4,148:25	1,565:15	1,292:15	350:25	7,356:20
Timber Management	1,266:40	21:50	69:20	32:45	1,390:35
Fish and Wildlife	3,761:45	199:35	140:50	13:10	4,115:20
Lands	469:45	26:00	29:45	—	525:30
Parks	298:15	11:10	29:05	—	338:30
Research	277:35	—	3:00	—	280:35
Interdepartmental Flying	561:55	63:00	1:00	13:10	639:05
Administration	3,968:20	26:50	218:55	—	4,214:05
	14,752:40	1,913:40	1,784:10	409:30	18,860:00

BREAKDOWN OF ADMINISTRATION

	LANDS AND FORESTS	COMMERCIAL		
	Aircraft	Fixed Wing	Helicopters	Totals
Mercy Flights	25:15	—	—	25:15
Tests (Radio and Aircraft)	323:40	—	—	323:40
Ferrying and Instructions	—	—	147:25	147:25
Entomology	86:40	—	—	86:40
Forced Landings and Operations	716:30	—	39:55	756:25
Transportation	2,816:15	26:50	31:35	2,874:40
Surveys	—	—	—	—
	3,968:20	26:50	218:55	4,214:05

Table 11
AIRCRAFT FLYING TIME AND TRANSPORT

AIRCRAFT	FLYING TIME 1924-1966	FLYING TIME 1966-1967	TOTAL	EFFECTIVE LOADS 1966-1967	
BEAVER:					
CF-OBS	6,482:10	365:55	6,848:05	62 tons	265 pounds
CF-OCA	4,978:15	:30	4,978:45	—	—
CF-OCB	6,112:20	380:35	6,492:55	102 tons	405 pounds
CF-OCD	4,900:40	340:25	5,241:05	111 tons	1,194 pounds
CF-OCE	5,891:55	385:25	6,277:20	169 tons	774 pounds
CF-OCG	4,445:55	323:35	4,769:30	186 tons	263 pounds
CF-OCH	5,132:45	388:40	5,521:25	101 tons	1,259 pounds
CF-OCK	5,193:15	137:10	5,330:25	54 tons	1,560 pounds
CF-OCL	4,568:05	285:45	4,853:50	63 tons	1,651 pounds
CF-OCN	5,591:25	309:10	5,900:35	9 tons	680 pounds
CF-OCP	6,307:00	328:10	6,635:10	85 tons	645 pounds
CF-OCT	5,800:15	327:10	6,127:25	81 tons	548 pounds
CF-OCV	4,849:55	352:50	5,202:45	99 tons	1,030 pounds
CF-OCX	4,833:15	221:45	5,055:00	55 tons	1,049 pounds
CF-OCZ	3,747:55	267:05	4,015:00	76 tons	1,270 pounds
CF-ODA	4,350:55	17:45	4,368:40	2 tons	755 pounds
CF-ODB	5,184:35	353:20	5,537:55	97 tons	1,515 pounds
CF-ODC	5,958:45	476:15	6,435:00	124 tons	1,031 pounds
CF-ODD	2,388:55	232:30	2,621:25	77 tons	394 pounds
CF-ODE	4,070:25	334:50	4,405:15	87 tons	1,460 pounds
CF-ODF	4,173:00	266:10	4,439:10	135 tons	297 pounds
CF-ODG	5,318:30	300:25	5,618:55	61 tons	1,875 pounds
CF-ODO	1,140:00	227:05	1,367:05	58 tons	430 pounds
CF-ODS	1,182:55	472:10	1,655:05	118 tons	1,396 pounds
OTTER:					
CF-ODJ	4,036:15	489:10	4,525:25	198 tons	1,200 pounds
CF-ODK	3,232:30	363:20	3,595:50	496 tons	400 pounds
CF-ODL	3,805:55	325:10	4,131:05	125 tons	1,700 pounds
CF-ODP	2,729:10	244:25	2,973:35	265 tons	1,950 pounds
CF-ODQ	3,132:55	342:35	3,475:30	165 tons	1,277 pounds
CF-ODU	1,863:20	265:20	2,128:40	701 tons	470 pounds
CF-ODV	2,581:35	336:30	2,918:05	297 tons	210 pounds
CF-ODW	1,700:25	403:00	2,103:25	336 tons	20 pounds
CF-ODX	1,172:35	351:30	1,524:05	358 tons	1,524 pounds
CF-ODY	894:10	283:05	1,177:15	718 tons	1,108 pounds

Table 11
AIRCRAFT FLYING TIME AND TRANSPORT (Continued)

AIRCRAFT	FLYING TIME 1924-1966	FLYING TIME 1966-1967	TOTAL	EFFECTIVE LOADS 1966-1967	
WIDGEON:					
CF-ODR	2,140:55	241:40	2,382:35	19 tons	1,795 pounds
TURBO BEAVER:					
CF-OEA	451:30	426:25	877:55	109 tons	1,525 pounds
CF-OEB	239:55	355:40	595:35	65 tons	1,597 pounds
CF-OEC	261:40	365:35	627:15	91 tons	16 pounds
CF-OED	419:40	321:00	740:40	70 tons	919 pounds
CF-OEE	350:15	457:15	807:30	169 tons	451 pounds
CF-OEF	248:20	406.50	655:10	91 tons	1,840 pounds
CF-OEH	—	291:15	291:15	56 tons	1,860 pounds
CF-OEI	—	258:55	258:55	32 tons	1,225 pounds
CF-OEJ	—	11:45	11:45	6 tons	380 pounds
CF-OEK	—	261:35	261:35	68 tons	1,281 pounds
CF-OEL	—	175:50	175:50	33 tons	1,545 pounds
CF-OEM	—	175:35	175:35	22 tons	740 pounds
CF-OEN	—	110:30	110:30	21 tons	1,770 pounds
CF-OEO	—	116:20	116:20	14 tons	1,765 pounds
TWIN OTTER:					
CF-OEG	—	277:45	277:45	37 tons	1,750 pounds
ALL OTHER AIRCRAFT	254,353:50	—	254,353:50	—	—
	396,218:00	14,752:40	410,970:40	6,600 tons	64 pounds

Table 12
FLYING TIME — PILOTS

PILOTS	1924-1966	1966-1967	TOTAL
Allen, D. S.	4,640:10	362:20	5,002:30
Ayers, N.	—	173:00	173:00
Ballantyne, G. E.	3,338:35	345:45	3,684:20
Beaushene, G. D.	5,333:10	471:00	5,804:10
Bieck, A. H.	3,136:45	439:15	3,576:00
Burtt, A. E.	9,711:35	337:05	10,048:40
Calver, D. R.	4,727:00	334:50	5,061:50
Campbell, G. E.	6,974:50	495:05	7,469:55
Colfer, A. P.	9,265:45	535:20	9,801:05
Cooke, T. C.	8,631:55	172:30	8,804:25
Cram, W. W.	2,352:50	314:35	2,667:25
Croal, D. M.	3,829:20	433:15	4,262:35
Culliton, J. E.	1,396:50	46:40	1,443:30
Denley, J. G.	8,622:25	301:55	8,924:20
Evans, J. B.	5,698:55	333:00	6,031:55
Fiskar, U. W.	5,763:30	15:25	5,778:55
Good, S. D.	251:40	354:25	606:05
Glennie, N. S.	4,172:50	316:00	4,488:50
Hoar, H. S.	3,790:30	286:20	4,076:50
Hoeberg, P. S.	4,739:30	599:00	5,338:30
Howe, F. R.	568:55	305:30	874:25
Kachanovsky, J.	—	248:45	248:45
Kirk, C. J.	5,884:45	269:30	6,154:15
Lamont, J. A.	5,011:10	387:20	5,398:30
Lefeuvre, C. J.	10,702:45	395:55	11,098:40
Lowe, B.	2,539:00	356:20	2,895:20
Marych, E.	576:25	360:10	936:35
McDougall, F. A.	5,579:25	4:05	5,583:30
McLellan, D.	—	159:30	159:30
McLeod, A. A.	336:55	331:50	668:45
McLeod, A. K.	396:50	641:40	1,038:30
McNabb, D. D.	557:05	507:55	1,065:00
Moore, K.	—	246:25	246:25
North, D. H.	2,320:20	504:20	2,824:40
Parsons, R.	8,356:00	254:40	8,610:40
Pike, S. J.	2,271:55	201:50	2,473:45
Siegel, J.	6,510:40	308:15	6,818:55
Speight, H. C.	9,985:30	447:30	10,433:00
Taylor, J. M.	3,770:00	43:55	3,813:55

Table 12
FLYING TIME — PILOTS (Continued)

PILOTS	1924-1966	1966-1967	TOTAL
Thomas, E.	4,794:55	343:35	5,138:30
Thompson, F. J.	4,154:55	533:20	4,688:15
Turcotte, L. J.	2,730:55	418:20	3,149:15
Weisflock, E. J.	688:20	534:25	1,222:45
Other Pilots	223,044:15	280:50	223,325:05
	397,159:05	14,752:40	411,911:45

Table 13
MERCY AND EMERGENCY FLIGHTS 1966-67

DATE	AIRCRAFT	PILOT	JOURNEY	TIME	REASON
April 2/66	CF-OED	Pike, S. J.	South Porcupine - Gogama	1:05	One Indian from Reserve engaged in slashing right of way sustained cuts to abdomen and chest from power saw.
May 13/66	CF-ODW	Campbell, G. E.	White Partridge - Traverse Lake	:10	Deceased man flown to Traverse Lake.
May 26/66	CF-ODD	Hoeberg, P. S.	SW Direct Lake - Kenora	:30	Rescued badly injured pilot and passenger from burning aircraft.
June 12/66	CF-ODC	Good, S. D.	South Porcupine Lake - Gogama	2:30	Quebec man employed by Ottawa firm had foot badly cut with axe.
June 30/66	CF-ODF	Denley, J. G.	Nym Lake	:10	Man and his 2 children stranded on island on Oliphant Lake when high winds damaged his canoe. Stranded for 5 days. Were picked up as an emergency.
July 20/66	CF-OCV	Ballantyne, D. E.	Smith's Bay - Parry Sound	1:10	Tree planter broke his leg while working for department. Was flown to Parry Sound.
July 2/66	CF-ODC	Good, S. D.	Gogama - Sudbury	1:45	Gogama woman flown to Sudbury for confinement.
July 5/66	CF-ODJ	McLeod, A. K.	Pickle Lake	7:35	Boy Scout had leg cut with an axe at Scout camp at Winisk River and was flown to Pickle Lake.
July 18/66	CF-ODW	Campbell, G. E.	White Lake - Canoe Lake	:20	Picked up canoest at White Lake. Boy, 12 years, high fever and upset stomach.
Aug. 2/66	CF-OCE	Lamont, J. A.	Lady Evelyn Lake - Kewaydin Camp	:05	Young girl, member of camp canoe party, very sick and in need of immediate medical attention.
Aug. 4/66	CF-OEF	Allen, D. W.	Temagami Lake - Sudbury	:50	Two men camped at YMCA camp flown to Sudbury: one had a broken leg and one with an axe cut on leg.
Aug. 19/66	CF-ODC	Campbell, G. E.	Big Trout Lake - Smoke Lake - Aylen Lake	1:20	Two boys, one with a broken ankle and one with a wrenched back, taken to Smoke Lake to be taken back to the camp.
Aug. 19/66	CF-ODS	Turcotte, L. G.	Beaver Lake - South Porcupine - Gogama	1:25	Man suffered stroke requiring flight to South Porcupine Hospital.
Aug. 19/66	CF-OCN	Evans, J. B.	Coffee Lake - Elliot Lake - Lauzon Lake	:20	72-year-old prospector on Coffee Lake suffering from heart attack. Flew ailing man and his companion to Elliot Lake.
Sept. 24/66	CF-OCP	Turcotte, L. G.	Matagami - South Porcupine	1:35	Tree planter at Marne Lake Camp had an appendix attack necessitating flight to South Porcupine Hospital.
Jan. 11/67	CF-OED	Turcotte, L. G.	Gogama - Sudbury	1:20	Request to fly mother and sick daughter to Sudbury was received from Public Health Nurse after consultation with Department of Health doctor, Toronto.
Feb. 7/67	CF-ODE	Calver, D. R.	Chapleau - Sudbury	3:05	Logger at Island Lake Lumber Co., struck on head by falling tree. Believed to be massive hemorrhage. Was flown to Sudbury Airport to meet Air Canada flight to Toronto.
			17 Mercy Flights	25:15	

FISH AND WILDLIFE BRANCH

OBJECTIVE

To manage the lands and waters of the Province to ensure that (a) the maximum recreational and economic benefits are gained from the wildlife and fish species while keeping management practices compatible with other land and water uses; and to (b) permit the full harvest of the annual natural increases of fish and game species on a sustained yield basis.

ORGANIZATION

The Fish and Wildlife Branch is divided into two sections and their subordinate units with duties and responsibilities as follows:

WILDLIFE

Game Management: Maintenance and increase of game abundance through improvement of habitat, regulations, inventory of game numbers, measures of participation by hunters, establishment of public hunting areas and development of agreement with landowners to provide improved game habitat and hunting opportunities.

Fur Management: Biologically sound management of fur-bearing animals; counselling of trappers to assist them in achieving the highest economic returns for their furs; regulations; stocking of animals in depleted areas; and licensing of fur farms.

Field Services: Enforcement of the hunting and fishing regulations; development of training programs for conservation officers related to law enforcement; development of programs to secure the co-operation of the public in observing regulations and conduct of safe hunter examinations.

FISHERIES

Game Fish and Hatcheries: Lake and stream surveys; fish population studies; fish management units; public fishing areas; hatchery production; fish stocking; and licensing of private hatcheries.

Commercial Fish: Licensing of commercial operators; development of fisheries in Patricia area under Federal-Provincial Resources Development Agreement; and compilation of statistics on fishery effort and production.

Fisheries Inventory: Inventory of the waters of the Province; organization and co-ordination of the field programs; implementation of data processing systems to utilize inventory information for biological, economic and other uses.

Indian Resource Development: Technical assistance to Indians in liaison with the Department of Indian Affairs and Northern Development.

WILDLIFE SECTION

Game Management

Ontario offers more than 400,000 square miles of varied habitat in which game species adapted to each area exist. Accordingly, there are outstanding opportunities both for nature study and hunting. It is impossible to estimate the numbers of residents and visitors who participate in bird watching, photography and other studies of bird and animal wildlife. The sale of hunting licences, however, provides an accurate estimate of the numbers of those who participate in hunting as outlined below.

Table 1
HUNTING LICENCE SALES, 1966

TYPE OF LICENCE		NUMBERS SOLD
Resident Moose		48,498
Resident Deer		122,412
Dog — Raccoon	1,314	
Moose and Deer	12,693	14,007
Farmer's Deer		15,017
Regulated Hunting Camp (Lindsay)		84
Resident Bear		813
Resident Small Game		388,243
Summer Hunting (Groundhog)		46,403
Non-Resident Moose, Deer and Small Game		12,698
Non-Resident Deer and Small Game		8,858
Non-Resident Small Game		11,998
Non-Resident Spring Bear		3,910
Non-Resident Wolf		50
Non-Resident Pheasant Preserve		250

Once again there was an increase in the numbers of all licences sold, with the exception of the resident moose, which declined by 12,000.

The increasing interest and participation of sportsmen makes the development of a modern and effective wildlife management program essential. Inventories of game and their habitat, collection of harvest data, evaluation of habitat in the development of means to improve it, the creation of realistic regulations and their enforcement, the use of appropriate stocking techniques and the development of a suitable educational and public relations program are all part of game management.

Accompanying this is a continuing need to develop our staff of biologists, foresters and conservation officers, which has been done through special courses in the Universities and at the Ontario Forest Ranger School at Dorset.

DEER HUNTING AND MANAGEMENT

Over 146,000 deer licences were sold in 1966 compared with 140,000 in 1965. In addition, 12,700 non-resident moose licence holders could hunt deer if they wished. To obtain information on the hunt, 29,854 hunters were interviewed at checking stations and 3,719 were contacted in mailed surveys.

Southern Ontario: The dominant influence on hunting across the whole of southern Ontario was the heavy rain during the first week of the season. Many hunters stayed home or sat in their camps rather than face the downpour. The rain was lightest towards the western side of southern Ontario, but was heavy from Lindsay eastward. The effect is evident in hunting success figures. Interviews with 15,659 hunters in Parry Sound, Lindsay and Tweed districts revealed that only in Parry Sound was the hunting as good as in 1965. In Lindsay the overall success dropped from 21.1% to 16.5%, and in Tweed from 29.0% to 17.4%. This was entirely due to the inclement weather. As usual, there were great differences between organized hunters who generally had about 20% to 25% success and casual hunters who usually only had about 5%. The Bruce Peninsula was not so much affected by rain and showed a slightly higher hunter success than in 1965, but both Lake Simcoe and Kemptville districts were lower.

Farther north in North Bay and Pembroke Districts, hunters have been seeing fewer deer in recent years due to the mortality resulting from deep snow during the winters of 1958-'59 and 1959-'60. This year they were further discouraged by the miserable rainy weather. The overall hunter success was only 7.3% in North Bay District and 16.9% in Pembroke District. Surprisingly the success of casual hunters in Pembroke District remained high. At 9.6% it was higher than in Parry Sound, Lindsay or Tweed. It may be that organized hunters were more easily persuaded to stay in camp or the severe winters may have been worse in the northern parts of the district where most hunt camps were located.

In Sudbury and Sault Ste. Marie districts, the story was different. Manitoulin Island hunter success was up slightly to 29.2% in spite of rather poor weather. Unfortunately, the restricted land area on which this hunting took place led to overcrowding and there were complaints by hunters that they were interfering with each other. In Sault Ste. Marie district, the smaller number of hunters found that the deer herd was recovering from the mortality of 1958-'59 and 1959-'60. They had the highest success for many years at 30.0%.

Table 2
PER CENT SUCCESS OF DEER HUNTERS IN SOUTHERN ONTARIO

DISTRICT	1965 %	1966 %
Parry Sound	19.0	19.2
Lindsay	21.1	16.5
Tweed	29.0	17.4
Bruce Peninsula	10.7	12.4
Lake Simcoe	24.4	18.3
Kemptville	27.9	25.9

Northwestern Ontario: The sequence of mild and severe winters has been different in northwestern Ontario. The most recent severe winter was in 1965-66 and its effect on the deer was evident in the age distribution of deer and hunter success reported from the 1966 hunt. The deer which were yearlings during the hunting season had been fawns through the severe winter and had suffered most. This was shown by the decrease in percentage of yearlings in Fort Frances, Sioux Lookout and, particularly, in Kenora District where yearlings were little more than half the percentage of 1965. In addition, the severe winter left does in poor shape for raising young, and in Kenora fawns decreased from 24.7% of the kill in 1965 to 12.6% in 1966. Such a loss of deer was bound to affect hunter success. All three Districts showed decreases but Sioux Lookout was worst, dropping from 28.2% in 1965 to 13.6% in 1966. Although hunter success also decreased in Fort Frances and Kenora Districts, it was still higher than in any other part of the Province.

Evidence of Winter Deer Mortality in Northwestern Ontario during the Winter of 1965-'66 as revealed by data from the 1966 Deer Hunt:

Table 3
PERCENTAGES OF YEARLINGS EXAMINED IN NORTHWESTERN ONTARIO DURING THE 1965 AND 1966 HUNTING SEASONS

DISTRICT	1965	1966
Fort Frances	26.0	16.5
Kenora	32.7	18.4
Sioux Lookout	41.0	38.9*

*only 18 animals examined

Table 4
HUNTER SUCCESS IN NORTHWESTERN ONTARIO DURING THE 1965 AND 1966 HUNTING SEASONS

DISTRICT	1965	1966
Fort Frances	49.2	43.6
Kenora	48.1	32.9
Sioux Lookout	28.2	13.6

Prospects for 1967: The winter of 1966-'67 was hard but not severe in southern Ontario. Therefore, it is predicted that, given normal hunting weather, hunter success should be somewhat better than last year. In northwestern Ontario, hunter success will probably be about the same as last year, but somewhat lower than in the past.

Deer Range Improvement: Since the winter was mild no emergency operations were undertaken, but deer range improvement work continued on about the same scale as in previous years. Various treatments were tried on small areas to compare costs, to find methods which produced most browse and to find the browse utilized by deer. A total of 225.2 acres was treated in six districts at a total cost of $13,383. This work has provided us with much needed experience in deer range improvement as well as providing food for the deer.

Table 5
DEER RANGE IMPROVEMENT WORK, WINTER 1965'-66

DISTRICT	Size of Area Treated (net acres)	Cost
Sault Ste. Marie	25.7	$ 5,541
Sudbury	8.5	1,700
North Bay	40.0 (gross)	792
Pembroke	60.0	1,556
Parry Sound	91.0	3,730
Tweed	marking trees	64
Total	225.2	$13,383

Spring Deer Surveys: Because the winter of 1965-66 was very mild in southern Ontario, few Districts put much effort into spring surveys of deer. On the Bruce Peninsula, in Lake Huron District, the loss of deer was only 4.3%. This is very light compared with up to 40% lost during years with deep snow. A browse survey on the Bruce Peninsula revealed that deer wintering in areas where white cedar was abundant were using the cedar mostly for shelter. Food was provided by dogwood mixed with small amounts of other hardwoods such as willow, aspen and cherry.

In Sault Ste. Marie District, winter losses were only 8%. In three areas where pellet group counts have been carried out each year since 1963, they have indicated a remarkable increase in the deer population. On the basis of these figures, the Sault Ste. Marie District staff predicted an improvement in deer hunting this fall and the fulfillment of this prediction has already been described.

In northwestern Ontario, the situation was completely different. There was very deep snow, up to 37 inches, and it lasted throughout most of the winter. Observations of deer indicated they were in poor condition. The dead deer which were examined showed little fat in the bone marrow, an indication that body fat had already been exhausted. Although neither Sioux Lookout nor Kenora Districts found many dead deer in their spring surveys, shortages of deer did show up in the hunt. Thus, the survey methods must have been at fault and will have to be improved.

Table 6
ESTIMATES OF DEER PER SQUARE MILE IN STUDY AREAS

YEAR	McMahon Lake	Red Rock	Hagen Lake
1963	15.0	55.6	42.6
1964	45.2	107	70.9
1965	46.6	138	74.2
1966	20.8	133	100

MOOSE MANAGEMENT

The objective of moose management in Ontario is to provide the most hunting and viewing of moose which can be sustained without interfering with other interests.

During 1966, nearly 61,000 hunters bought moose licences. Once again a new record was set as the increase was 18% over the previous high in 1965. This increase is all the more significant in view of the fact that there was no hunting in southern Ontario, except in the Pembroke Forest District.

An estimated 56,398 of the licence holders hunted and killed 14,593 moose. Thus overall success was 26%. Wide variations in hunter success occurred throughout the moose range, with hunters in northwestern Ontario being more successful than those in the more heavily hunted northeastern areas. Non-residents as usual were more successful than residents. This reflects the greater amount of effort and money spent by the average non-resident to get a moose.

The problem of hunter distribution was the greatest it has ever been. Evidence of this was the numerous congested areas where road-hunters living in campers and tents congregated. There was a rapid increase in the number of non-residents, particularly, who were doing their moose hunting this way. As a result of the build-up of hunter numbers in certain popular areas, the hunter success for both residents and non-residents declined. But the number of moose killed remained virtually the same as in the previous year.

For example, in Kapuskasing District, where motor toboggans are widely used, over 100 man-days of hunting per week were recorded throughout November and mid-December. During the last three weeks, the man-days of hunting dropped to 77, 63, and then increased again to 108. On the other hand, in Geraldton District, where there was little use of motor toboggans, the man-days of hunting were much higher during the first two weeks of October than in Kapuskasing District, but were never over 100 after the first week of November.

A special survey of hunters using motor toboggans in Kapuskasing District revealed that 388 residents killed 111 moose and nine non-residents killed four. The success rates of 28.6% for residents using motor toboggans and 44.9% for non-residents were considerably higher than the overall success rate for that District of 22.6% for residents and 35.8% for non-residents. A similar survey in Cochrane District showed that hunters with motor toboggans went as far as 30 miles from main roads. Thus, the use of these machines for moose hunting provides increased hunting opportunities during the latter part of the season by providing an opportunity for hunters to get away from the roadways. As long as they are used for transportation only and not for chasing moose, the introduction of the motor toboggan can be viewed as a progressive development in moose hunting.

Prospects for the 1967 season are for even more hunters and a higher kill of moose. Results of aerial surveys and analyses of biological data — such as sex and age ratios and reproductive rates — indicate that the allowable harvest from the total population of moose is nowhere near being utilized as yet in most of the northern moose range. In the south, the situation is different since with more hunters and greater accessibility moose are more vulnerable to hunting. As a result, local overshooting has occurred in the past. To allow moose numbers to build up, the seasons were shorter or in some areas closed.

Traditionally, the moose hunt has not lasted much more than the first two or three weeks of October, during which time 70% to 80% of the kill has been made. That is, after the snow came and lakes froze up, most hunters seemed to prefer not to hunt moose. The advent of cheap reliable winter transportation in the form of powered snow toboggans apparently is changing this. In each of the last few years, there has been more use made of such vehicles and, as a result, hunting pressure is gradually being spread out more over the whole season.

SPRING BEAR HUNTING

Bear management aims at reducing the wasteful shooting of bears merely because they are a nuisance, and promoting more positive uses such as sport hunting and observing. It is evident that this policy is succeeding from the continued increase in licence sales. In 1966, 3,910 non-resident spring bear hunting licences were sold, representing a 48% increase over sales in 1965, and 813 resident licences, representing a 39% increase. Inquiries about bear hunting by residents have been increasing and it seems evident that, after a rather slow start during the past few years, bear hunting is increasing in popularity.

Mailed surveys of bear hunters are not conducted, but information is obtained through post cards attached to the licences. As a result, the percent success reported is too high, for hunters who have shot a bear are more likely to reply than those who have not. However, this bias should remain fairly constant from year to year. This being so, the results (see table 8) suggest that more bears have been shot than in previous years. As is the case with moose, the increase in numbers of bears shot has not kept up with the increase in numbers of hunters. This is probably because many hunters taking up bear hunting for the first time are inexperienced.

Over 80% of the bear hunters are non-residents. Of these, about one-quarter come from Michigan, a fifth from Pennsylvania and nearly a fifth from Ohio. The rest come from the remaining eastern and mid-western states. These hunters go mainly to Sault Ste. Marie district (167 reported), Chapleau (163), Swastika (116) and Kenora (92). Among these the highest success in 1966 was reported from Kenora, where it was 49%; Swastika reported 40%, Sault Ste. Marie 35% and Chapleau 34%.

Most of the bears shot are adult males. In 1966, they comprised 60% of the kill. The rest were 26% adult females, 9% male cubs and 5% female cubs. Since bears collected in other ways usually show less than 50% adult males, it seems that hunters are selecting them because of their size, or else they are inclined to boast about shooting adult males when in fact they have not. Probably both these factors affect the sex ratios reported.

Bears weighed thus far in Ontario have averaged less than bears from other areas. The average for 34 adult males was 179 pounds, compared with 263 for 19 weighed in New Hampshire, 324 for 49 weighed in New York, and 305 for 16 weighed in Florida. The average weight for 26 adult females in Ontario was 126, compared with 183 for 11 in New Hampshire, 200 for 19 in New York, and 189 for 12 in Florida. The biggest bear weighed so far from Ontario was killed by a car in the Magnetawan River area of Parry Sound district and weighed 451 pounds. For comparison, record weights from New York were 599 pounds (1956) and for Florida 580 pounds (1959). The reason that bears in Ontario are smaller is not known.

The favourite month for hunting bears is May, when 57% were shot in 1966. Bears are also shot during the fall hunting seasons, but present statistical data concerning numbers and sex is not adequate.

Table 7
MOOSE HARVEST DATA FROM HUNTER SURVEYS 1966-'67

DISTRICT	No. Moose Killed	% Success	No. Moose Killed	% Success	No. Moose Killed
Pembroke	76	24.2	—	—	76
North Bay	487	17.6	8	12.4	495
Sudbury	466	14.2	28	18.9	494
Sault Ste. Marie	470	14.9	191	33.0	661
White River	460	19.3	431	28.9	891
Chapleau	416	18.9	267	31.3	683
Gogama	397	14.4	121	26.7	518
Swastika	666	10.2	46	17.7	712
Cochrane	1,031	18.3	71	28.2	1,102
Kapuskasing	976	22.6	165	35.8	1,141
Geraldton	1,088	32.4	702	47.3	1,790
Port Arthur	1,652	33.8	657	40.5	2,309
Fort Frances	284	33.5	—	—	284
Kenora	599	40.4	1,015	49.4	1,614
Sioux Lookout	456	33.3	1,367	54.7	1,823
Grand Total	9,524	Av. 21.7	5,069	Av. 41.4	14,593

Table 8
LICENCE SALES, RETURNS, REPORTED KILL AND PERCENT SUCCESS — BLACK BEAR HUNT — SPRING 1963-1966

	Non-Resident	Resident
LICENCES SOLD		
1963	1,999	354
1964	2,169	414
1965	2,647	583
1966	3,910	813
NO. OF RETURNS		
1963	543	*
1964	801	71
1965	985	84
1966	1,170	96
PERCENT RETURNS		
1963	27.1	*
1964	36.9	17.1
1965	37.2	14.4
1966	29.9	11.8
BEARS REPORTED KILLED		
1963	237	*
1964	332	27
1965	459	49
1966	503**	55**
	(478)	(37)
PERCENT SUCCESS REPORTED		
1963	43.6	*
1964	41.4	38.0
1965	46.6	58.3
1966	40.9**	38.5**

*Figures not available.

**1966 Percent success based on kill of one bear per hunter. 503 bears killed by non-residents and 55 bears killed by resident hunters based on total reported kill.

PHEASANT MANAGEMENT

The prime objective of management is to maintain or increase natural ring-necked pheasant populations in suitable habitat, and to provide recreational opportunities at as high a level as possible consistent with principles of sustained yield and other uses of agricultural land.

Management includes the maintenance of natural populations in areas having less than 50 inches annual snowfall a year; the utilization of game farm stocks as efficiently as possible; and the collection of information relating to pheasant populations and their harvest.

Season lengths varied from four to 83 days across the Province, depending upon the availability of pheasants and maintenance of breeding stocks. Bag limits remained unchanged with the exception of Lincoln County, where an experimental "cocks only" season was instituted.

Distribution of Game Farm Stock: Two Provincial game bird farms continued to play an important role in the regulated township system in maintaining private lands open to public upland game hunting. Day-old chicks, poults and year-old breeding stock were provided to municipalities and sportsmen's clubs for immediate or subsequent release. Increased numbers of adult birds were reared at the game farms for release on public hunting units operated by the Department.

Table 9
PRODUCTION OF RING-NECKED PHEASANTS CODRINGTON & NORMANDALE GAME BIRD FARMS 1966

	Chicks	Poults	Adults	Old Breeding Stock
Codrington	17,435	7,800	3,016	1,366
Normandale	28,430	7,800	2,430	1,260
Total	45,865	15,600	5,446	2,626

Harvest Information: Districts continued to evaluate trends in pheasant populations and the effects of management practices including regulations and stocking. Statistics on opening day and season hunting success are shown below for three southern districts.

Table 10
PHEASANT HUNTING SUCCESS — 1966

	No. Hunters Checked	No. Pheasants Taken	Average Daily Bag Birds Per Hunter
DISTRICT			
LINDSAY			
(opening day)	179	92	0.51
SIMCOE			
(opening day)	614	406	0.66
(remainder of season)	704	189	0.27
(complete season)	1,318	595	0.45
HESPELER			
(opening day)	989	711	0.72
(remainder of season)	1,376	600	0.44
(complete season)	2,365	1,311	0.55
ERIE			
(Pelee Island — complete season)	157	883	2.81
(Mainland — complete season)	1,049	372	0.35

Habitat Management: One of the most important factors limiting native populations of ring-necked pheasants is the loss of nests and nesting hens from hay-mowing operations. The staff of southern Districts publicized the need to leave the cutting of grass along roadsides, farm lanes and other waste areas until after July 10 to increase pheasant production. Publicity respecting other effective management practices also was provided.

Special Studies: To evaluate the effects of such factors as land-use practices, agricultural insecticide applications, and harvest regulations on pheasant populations in the Niagara Peninsula, a special five-year study was instituted in 1966 in Lincoln and Welland counties. A graduate biologist was hired on a contract in November, 1966 for a six-month period to coordinate initial stages of the study which is continuing.

HUNGARIAN PARTRIDGE

Management of Hungarian partridge is designed to establish populations in all areas of suitable habitat in the Province, and to provide maximum recreational use of available partridge stocks.

Kemptville District staff live-trapped 101 partridges during January and February, 1967. Some 50 of these birds were released in March in Tecumseth Township, Simcoe County; 36 were released in Darlington Township, Durham County. The remainder were held for propagation purposes at the Codrington Game Farm.

Partridge populations in the most important hunting range in eastern Ontario continued to prosper. Covey counts, average covey size and availability of birds during the liberal season established from September 24 to November 26 inclusive, indicated an increase in the number of Hungarian partridge from the previous year.

BOBWHITE QUAIL AND OTHER SMALL GAME

Bobwhite quail continued to increase in numbers and in distribution, and the counties of Kent, Lambton, Middlesex and Elgin enjoyed a hunting season from November 2 to 12 in 1966.

The cottontail rabbit, European hare and, in some areas, the snowshoe hare, continued to supply a very large amount of quality recreation. Populations of cottontails and "jacks," as European hare are called, were at particularly good levels across much of southern Ontario. For example, field checks of 1,388 rabbit hunters in Peel, Ontario, Simcoe and York counties, in Lake Simcoe District, indicated a harvest of 259 cottontails, 235 European hares and 96 snowshoe hares, and an average daily success rate of 2.43 animals per hunter.

All available information indicates that hunting pressure has little influence on the annual status of most resident small game species. Thus, management aims to provide information to the public relative to annual availability of small crops and to establish the most liberal seasons possible, consistent with other uses of land in agricultural areas. Since a high proportion of small game hunting takes place on private lands, the development of good hunter-landowner relations is important.

Many small game species, such as woodcock, snipe, squirrel and raccoon, are neglected by a large proportion of Ontario's hunters. Although these species were present in good numbers across much of Ontario, only a very small fraction of the available surplus was taken by hunting.

WATERFOWL MANAGEMENT

Ontario's waterfowl management objectives are designed to maintain waterfowl populations at or near the levels which occurred during the favourable 1955-57 period, and to provide opportunities for quality recreation so that hunters and non-hunters alike can utilize and enjoy the resource, now and in the future. Specifically, management is designed to determine and predict trends in the annual abundance of important species produced in Ontario, and to keep the public informed on important facets of waterfowl management. The utilization of under-harvested species is desirable, and reduction of the kill of those species exhibiting lesser abundance due to habitat conditions is essential. Development, protection and improvement of habitat important to waterfowl is necessary to improve waterfowl production where possible. The management program includes development of additional hunting opportunities for waterfowl in areas where public access is limited or where certain species of waterfowl are not now available to Ontario residents.

Waterfowl banding continues to be a most important management technique in assessing the status of important waterfowl species in Ontario. Many agencies co-operated in the 1966 banding program, including this Department, the Canadian Wildlife Service, the United States Fish and Wildlife Service, and interested private agencies such as the University of Guelph, Sportsmen's Clubs, and the Ontario Bird Banders' Association. In total, 12,778 ducks and geese were banded prior to the season in 1966. Of the 28 banding stations, Department personnel operated 15 and provided direct or technical assistance to five others.

Table 11
PRESEASON WATERFOWL BANDING IN ONTARIO — 1966

SPECIES	NO. BANDED
Mallard	3,964
Black	2,045
Blue Wing Teal	4,852
Wood Duck	807
Other	1,110
Total	12,778

Seasons and bag limits were established in consultation with Federal authorities. Wood ducks continued to increase and a daily limit of four again was allowed; restrictions on red heads and canvasbacks were retained with a limit of two of either species. After October 14, hunters were allowed an additional two scaup or goldeneye since, at present, these late migrants are hunted very lightly.

The Department co-operated fully in the institution of a new Federal migratory game bird hunting permit which is designed to facilitate surveys of waterfowl hunters and to obtain, for the first time, accurate information concerning the distribution of hunters in Canada and their harvest of waterfowl. First year permit sales are listed below and indicate the importance of waterfowl hunting in this Province.

Table 12
SALES OF CANADA MIGRATORY GAME BIRD HUNTING PERMITS IN 1966

PROVINCE	Resident of Canada	Non-Resident of Canada	Unknown	Total
Newfoundland	13,166	23	19	13,208
Prince Edward Island	3,242	14	—	3,256
Nova Scotia	7,117	60	10	7,187
New Brunswick	8,229	249	17	8,495
Quebec	35,702	621	49	35,702
Ontario	135,093	8,124	179	143,396
Manitoba	36,037	1,535	37	37,609
Saskatchewan	41,765	2,729	43	44,537
Alberta	51,882	729	55	52,666
British Columbia	31,724	497	23	32,244
Unknown	362	50	1,347	1,759
Total	363,649	14,631	1,779	380,059

Field staff continued to evaluate hunter success and to collect biological information during the open season. Opening day hunting success for important southern waterfowl Districts were as follows:

Table 13
OPENING DAY WATERFOWL HUNTING SUCCESS SELECTED LOCATIONS, SOUTHERN DISTRICTS

	No. Hunters Checked	No. Ducks	Ducks per Hunter
Kemptville —complete district	599	629	1.06
Tweed —complete district	841	979	1.16
Lindsay —complete district	427	695	1.63
Hespeler —Luther Marsh	1,587	1,074	.66
—8 selected areas	391	251	.64
Erie —Long Point and Rondeau Public Hunting Units	326	404	1.25
Simcoe —complete district	1,245	1,011	.81
—Holland Marsh	447	328	.73

During the season, almost 9,000 wings of waterfowl taken by hunters were collected. These were analyzed by staff biologists and conservation officers as to species, age and sex by noting colour and ware patterns of feathers. An expert in this technique from the United States Fish and Wildlife Service gave leadership in this work, and the data were analyzed by computer at the University of Guelph.

Improvement of waterfowl habitat and production continued in various districts. Over 2,000 acres of prime habitat at Tiny Marsh, near Midland, was created by a dam erected in March, 1967. The Districts of Fort Frances, Swastika and Kemptville created additional waterfowl pot-hole habitat in areas of heavy vegetation and shallow water by exploding a combination of ammonium-nitrate and fuel oil. This relatively new and inexpensive technique will prove most useful in improving wetland habitat in future years. On the goose management area on Lake St. Lawrence, production of Canada geese continued to increase. More than 700 goslings were produced on the adjacent Ontario and New York waterfowl management areas, where breeding Canada geese were rare or absent only 10 years ago. Over 3,000 migrating Canadas stopped over at the St. Lawrence Sanctuary during the fall flight. Although total kill is not known, all evidence suggests that Canada geese were taken in greater numbers than usual across the eastern counties in 1966.

In the Hudson Bay and James Bay areas, the Department continues to assist Indians in establishing commercial goose hunting camps. At the camp at Fort Severn, a total income of $9,510.82 was realized from the 108 hunters participating; 2,305 geese, 121 ducks, 61 ptarmigan and 14 seals were taken by the tourists and Indians in 1966. Goose hunting was excellent and all but three hunters left with their possession limit of 10 geese.

A new Indian-run goose camp was set up in 1966 at Kapiskau on James Bay, near Fort Albany, under the direction of Cochrane District personnel. In its first season of operation, the camp ran at less than capacity, but a gross income from all sources of $3,310.50 was realized. A total of 926 geese, 482 ducks, one bear (black) and one ruffed grouse were taken by Indian and white hunters from September 14 to October 9 inclusive.

RUFFED GROUSE MANAGEMENT

Management objectives are directed toward: (a) encouraging and providing suitable regulations for the optimum utilization of this generally under-harvested species, which is subject to periodic severe fluctuations in numbers; (b) encouraging the use of woodland management techniques, which increase the production of grouse; (c) improving grouse production on intensively managed public hunting areas through habitat improvement techniques; and (d) recording trends in grouse abundance and providing the public with predictions regarding the annual availability of grouse.

District staff assessed grouse populations by means of drumming counts in spring, brood counts in summer and the availability of grouse to hunters during the open season.

In general, northern populations of ruffed grouse were not at the high levels often reached during the peak of the nine-year grouse cycle. Although there was evidence that declines had occurred in hunter success in many Districts, they were not substantial. From information for the past several years, it appears that grouse are on the ascending aspect of their cycle.

In the discontinuous woodlands of agricultural southern Ontario, where violent fluctuations in grouse numbers are not common, excellent grouse hunting again was available.

The following table shows hunter success figures for 1965 and 1966:

Table 14
RUFFED GROUSE HUNTER SUCCESS, 1965-1966

DISTRICT	ON FOOT Hunter Days		Birds Seen/100 Hrs.		Birds Shot/100 Hrs.		BY ROAD Hunter Days		Birds Seen/100 Miles		Birds Shot/100 Miles	
	1966	1965	1966	1965	1966	1965	1966	1965	1966	1965	1966	1965
Lake Erie	109	106	12.0	12.8	18.0	25.6	—	—	—	—	—	—
Lake Huron	90	616	—	—	11.3*	8.0	—	—	—	—	—	—
Lake Simcoe	128	139	14.1	16.7	34.0	38.1	—	—	—	—	—	—
Lindsay	167	281	—	18.0	—	8.1	13	—	4.1	4.8	1.2	—
Tweed	210	121	21.6	—	16.0	15.6	102	—	4.1	—	2.3	—
Kemptville	18	73	—	—	52.2	46.5	—	—	—	—	—	—
Pembroke	—	154	—	109.0	—	27.9	—	100	—	9.9	—	3.9
Parry Sound	124	101	57.8	96.0	30.5	46.1	160	36	5.8	8.3	2.9	5.4
North Bay	226	197	80.6	71.0	39.9	34.9	365	241	9.0	11.3	4.8	7.2
Sudbury	222	165	—	103.0	41.0	68.3	114	135	—	3.9	2.0	3.2
Sault Ste. Marie	180	—	107.0	—	68.4	41.7	282	—	8.3	—	5.4	4.1
White River	67	51	84.0	86.9	45.0	59.1	66	—	9.5	9.7	4.2	5.5
Chapleau	766	—	—	200.0	31.0	100.0	1,062	—	—	—	2.9	—
Gogama	26	73	150.0	121.0	77.0	38.0	113	86	13	20.0	6.0	9.0
Swastika	—	—	—	—	—	—	—	—	—	—	—	—
Cochrane	96	70	45.6	54.6	23.7	32.5	66	26	6.4	6.0	3.4	5.0
Kapuskasing	41	29	137.7	104.3	88.4	65.2	62	69	4.9	6.0	3.4	4.1
Geraldton	57	—	43.1	—	24.8	—	30	—	6.1	—	3.9	—
Port Arthur	18	47	—	—	152.0	71.1	106	153	—	—	14.0	12.2
Fort Frances	151	26	120.8	52.4	71.5	26.2	292	124	—	—	48.1*	53.2**
Kenora	36	103	—	91.3	28.0	52.1	12	29	—	5.0	5.4	3.8
Sioux Lookout	13	13	87.6	100.0	49.5	44.2	16	8	6.0	5.8	2.6	3.4

**Per 100 hours.
*81 cooperators report taking 61.0 per 100 hours.

PHEASANT HUNTING UNITS

Four pheasant hunting units operated by the Department in 1966 offered quality, "pay-as-you-go" hunting to 3,484 sportsmen. At Presqu'ile, Darlington and Sibbald Point Parks and on the Gananoque Provincial Hunting Area, 5,169 pheasants from the Codrington and Normandale Game Bird Farms were released. A limited number of pheasants were released in Tiny Marsh of Simcoe County, in the Gamebridge area of Ontario County, and Brighton in Northumberland County to provide opportunities to hunt pheasants outside the natural range of this game bird.

The open season for public hunting of pheasants on a portion of each park extended from October 12 to November 30. Permits were made available on a first-come, first-served basis at a fee of $5.00. The number of hunters in each hunting area was restricted and the bag limit was three pheasants regardless of sex.

Statistics on pheasant hunting areas operated by the Department in Provincial Parks are as follows:

Table 15
PUBLIC PHEASANT HUNTING AREAS, 1966

	Presqu'ile	Darlington	Sibbald Point
Hunting Area in acres	415	415	450
Number of Hunters	436	892	996
Number of Birds Released	910	1,460	1,453
Number of Birds Recovered	721	1,248	1,282
Birds Per Hunter	1.6	1.4	1.3

In the three parks listed above, 2,324 hunters participated in 1966, compared to 1,592 the year previously. Pheasant hunting in Earl Rowe Provincial Park was discontinued in 1966 because of intensive park development.

MULTIPLE PURPOSE HUNTING UNITS

The Gananoque Provincial Hunting Area is a 1,041 acre tract of land in Leeds and Frontenac counties, acquired for the purpose of providing hunting for several game species including rabbits, ruffed grouse, woodcock, waterfowl and deer. Pheasants are hunted on a put-and-take basis.

Habitat improvements to the management area in 1966 included planting 60,000 conifers and 575 shrubs suitable for ruffed grouse winter shelter and escape cover.

Statistics for the 1966 season are as follows:

Table 16
GANANOQUE PUBLIC HUNTING AREA, 1966

Number of hunters	1,160
Number of Pheasants released	1,346
GAME HARVESTED:	
Pheasants	1,023
Ruffed Grouse	46
Ducks	5
Woodcock	14
Cottontail Rabbits	115
European Hare	14
Total	1,217

Units of Game per Hunter: 1.0

WATERFOWL HUNTING UNITS

Five marshlands adjoining Provincial parks were managed in 1966 to provide the public with opportunities to hunt waterfowl. Department blinds were available to sportsmen for a daily fee of $4.00 at Long Point and Rondeau on Lake Erie, and $2.00 at Darlington Park on Lake Ontario. These controlled shooting areas are managed to provide hunting of reasonable quality by attracting and holding waterfowl in the marsh through a system of refuges and feeding sanctuaries. Seasonal permits for waterfowl hunting were issued at $4.00 each on the less intensively managed units at Holiday Beach and Presqu'ile Provincial Parks and a portion of Rondeau Provincial Park. Statistics for these areas for 1966 follow:

Table 17
SUMMARY OF PUBLIC WATERFOWL HUNTING AREAS, 1966

Name of Area	Hunting Area (in acres)	Number of Hunters	No. of Waterfowl Taken	Average Bag Per Hunter
Long Point	1,750	2,370	2,696	1.14
Rondeau	9,200	722 129*	908	1.26
Presqu'ile	2,170	415*	—	—
Darlington	380	427	257	0.60
Holiday Beach	262	597*	756	1.27

*Season permits. Other figures denote daily permits.

Total number of hunters in all units — 4,531.

Popularity of the Provincial public hunting ground system has grown in recent years. Plans are underway to increase the number of managed wildlife areas throughout the Province.

Since the land acquisition program began in 1962, 15,655 acres have been purchased for fish and wildlife management purposes. During the current fiscal year, 6,197 acres were acquired on seven wildlife management areas.

Under current legislation, the Minister may enter into agreements with the owners of lands respecting the management, perpetuation and rehabilitation of the wildlife resources of Ontario. At the present time, this program of landowner assistance is in the planning stage, and will be designed to provide assistance to landowners in the form of protection against vandalism and careless hunting practices, and to increase game densities by improving quality and quantity of game habitat through provision of technical advice and other assistance to the landowner.

PUBLIC HUNTING GROUND PROGRAM

The objectives of the Public Hunting Ground Program include assuring that significant areas of Provincial Crown lands are retained from alienation or that land is acquired by the Crown to provide for hunting, fishing and associated recreation; providing hunting in areas where such opportunities have become restricted and the need for public hunting land is urgent; providing public access for purposes of hunting, fishing and other associated recreational pursuits on Crown lands; and the production of wildlife to full capacity on private lands through technical and other assistance to the landowner, and to make wildlife surpluses available to the public under Department-landowner agreements.

The need for public hunting grounds is greatest in Essex County; Lambton County near Sarnia; Middlesex and Elgin Counties near London and St. Thomas; Lincoln County near St. Catharines; Wentworth County near Hamilton; Waterloo County near Kitchener and Guelph, and Halton, Peel, York and Ontario Counties within a 50-mile radius of Toronto.

The amount of land recommended for acquisition in each county is based on proximity of the area to population centres, capability of the area to produce wildlife and the possibilities for intensive management of a variety of wildlife species, costs of acquisition and development and danger of destruction of wildlife habitat.

Fur Management

Beaver remains the most important fur-bearer in Ontario. Beaver populations are generally stable, although they may be down slightly in some areas of Patricia East and perhaps also in the Pembroke District. The slight drop in beaver harvest, though not particularly significant, is attributed to the drop in market value.

The mink situation has been a source of concern for the past four years, with populations dwindling all over the Province. However, there is an encouraging pattern emerging, with noticeable increases of population throughout the northwestern part of the Province, some stabilizing at a low point in the north-central area, while still declining slightly south of the Sudbury and North Bay Districts. It would appear that the return of good populations has started in the north-west and is spreading south and east. An interesting development in the fur market appeared during the year when mink pelts, although scarce, still exhibited a decline in prices.

The long hair furs (fisher, fox, lynx, marten, raccoon) dropped considerably in market value this year, but this appears to represent a return to more realistic prices after a few years of speculation in these pelts. The production of fisher and raccoon appears to be fairly stable, while lynx is still low. Lynx production should begin to recover next year and should provide an increased harvest in 1968-'69. Coloured fox populations are high enough that there is an increased harvest despite the reduced value. The marten population is still increasing and spreading in most areas, though harvests are many times greater than ever recorded.

The muskrat populations are governed principally by water levels, hence patterns vary throughout the Province. Because of severe water level fluctuations, populations are down in Fort Frances and Sioux Lookout Districts, but up in Swastika, Lake Erie, Pembroke and Lake Simcoe Districts. The value of muskrat dropped drastically (50%), but the harvest was down only a relatively small amount.

FUR FARMING

The first and largest part of the 1966 ranch-raised mink crop was offered in December auctions to a very depressed fur market. Buyer attendance was lighter and a selective demand at substantially lower prices compared to the 1965 crop sales.

Good quality, dark and pastel mink, declined 25% and 15% respectively, with little demand or interest shown in either type. Light Blue, Dark Blue, Pearl and Beige types declined 20% to 30%, with limited interest shown.

Reserve limits based 10% below 1965 prices — the decline which was anticipated — and resulted in a large number of buy backs. Turnover at the initial sales ran 50% to 70%.

The cause of the sharp decline in the market is attributed to a number of factors. The mild recession in the economy of the large mink-consuming countries, and the decline in the stock market restricting the sale of garments at the retail level. The world production of mink approached the 24 million mark, a factor which ensured buyers a plentiful supply of pelts throughout the year and which could extend into the 1967 crop year.

As of March 1, 1967, 80% of the 1966 Canadian ranch mink production was sold. However, as it is estimated that only 35% to 40% of the world production was sold at this date, it is almost a certainty that a large carry-over will exist when the 1967 crop comes to market. The prospects, therefore, for the next selling season do not look bright.

Table 18
ONTARIO DEPARTMENT OF LANDS AND FORESTS
SUMMARY OF DISTRICT FUR RETURNS 1966-1967, RECORD OF CATCH AND VALUE BY DISTRICTS

DISTRICT	No. of Trappers	Ave. Received per Trapper	Value	Beaver 13.40	Fisher 12.77	Fox 5.85	Lynx 24.83	Marten 7.95	Mink 8.16	Muskrat .99	Otter 20.60	Raccoon 3.27	Squirrel .23	Weasel .30	Wolf 5.91	Bear 21.48	Castoreum 4.36
Chapleau	78	$664.95	$ 51,866.24	2,308	54	65	38	1,562	300	832	150	—	31	49	—	—	$ 28.50
Cochrane	170	388.75	66,087.98	2,789	92	72	58	2,079	326	3,233	139	—	414	488	—	—	42.50
Fort Frances	160	918.94	147,030.98	9,209	298	209	10	53	1,104	2,179	234	5	394	285	111	6	222.25
Geraldton	286	549.94	157,284.97	6,301	32	72	58	6,278	792	5,211	420	—	681	786	—	—	1.25
Gogama	98	461.67	45,243.79	2,002	54	32	76	1,098	299	1,394	139	—	89	41	8	2	27.00
Kapuskasing	248	654.66	162,357.82	6,827	43	88	90	6,760	725	873	315	—	—	244	6	1	100.00
Kemptville	600	149.91	89,947.59	3,782	—	100	7	—	329	31,797	39	1,024	46	24	12	—	24.25
Kenora	390	378.17	147,486.35	9,061	167	64	20	14	1,725	2,065	312	—	375	181	—	—	61.00
Lake Erie	458	209.73	96,060.33	7	—	106	—	—	638	84,690	—	1,898	26	66	11	—	—
Lake Huron	670	128.10	85,827.62	68	—	412	—	—	1,260	56,753	2	,4,852	24	47	19	—	—
Lake Simcoe	325	193.09	62,755.87	2,086	6	190	—	—	851	21,431	20	1,432	16	20	20	4	33.50
Lindsay	540	261.28	141,096.21	7,314	352	156	10	109	833	23,059	123	1,149	30	104	40	7	51.50
North Bay	120	784.62	94,154.56	5,185	219	171	65	116	961	5,100	196	79	85	97	31	15	138.00
Parry Sound	708	266.09	188,393.31	11,039	175	278	17	257	1,570	11,231	337	529	209	146	28	34	127.25
Pembroke	132	563.70	74,408.93	4,111	349	91	2	287	392	4,896	138	145	76	130	24	11	46.75
Port Arthur	476	337.92	160,849.92	8,893	302	429	60	2,224	865	2,018	296	—	100	320	45	7	105.00
Sault Ste. Marie	291	253.25	73,696.75	3,694	52	205	36	1,037	756	2,867	183	5	134	158	22	3	29.75
Sioux Lookout	100	486.81	48,681.66	2,611	86	32	18	460	425	1,040	169	—	226	100	7	4	26.75
Sudbury	298	456.29	135,975.61	8,140	120	452	58	22	903	6,371	283	102	100	119	87	13	68.75
Swastika	184	340.72	62,692.66	3,286	169	161	141	236	523	2,437	131	2	100	355	10	18	51.00
Tweed	756	282.32	213,436.45	12,302	64	1,016	26	14	925	26,493	228	575	99	109	46	3	75.00
White River	83	667.40	55,394.43	2,445	14	33	23	1,705	494	829	144	—	16	62	5	—	60.50
Patricia Central	644	416.70	268,358.98	12,849	95	120	119	589	4,170	20,165	1,521	—	2,910	1,420	—	—	48.50
Patricia East	371	390.29	144,799.44	7,532	21	12	64	1,586	310	12,450	685	—	197	210	44	—	—
Patricia West	802	258.18	207,066.43	9,935	252	15	171	105	2,488	29,728	724	—	1,112	2,160	—	—	—
	8,988	$331.64	$2,980,837.88	143,776	3,016	4,581	1,167	26,591	23,964	359,142	6,928	11,797	7,490	7,721	576	128	1,369.00
				$38,514.32	$28,976.61		$195,546.24		$142,716.80		$1,722.70		$3,404.16				$5,968.84
				$1,926,598.40	$26,798.85		$211,398.45		$355,550.58		$38,576.19		$2,316.30		$2,749.44		

Ranch-raised foxes also declined 25% from the 1965 price levels, as did all wild fur species with the exception of beaver. As in the previous year, most of the Silver, Platinum and Pearl Platinum foxes were sold to Japan. The small quantity of the Dawn-Glo fox, which was developed on an Ontario ranch, declined 10% and were purchased for an account in Japan.

The disease incidence on Ontario ranches was minimal again in 1966. Six cases of distemper, one case of virus enteritis and four cases of plasmacytosis were diagnosed at the Ontario Veterinary College. The increased use of preventive vaccines for distemper and virus enteritis has achieved this good record, but distemper could be further reduced if more ranchers used the vaccine. It is felt that more cases of plasmacytosis exist on Ontario ranches than is reported to the Ontario Veterinary College.

A total of 494 Fur Farmer's Licences were issued during 1966. Of these, 444 were renewals of previous licences, 47 were for newly-established ranches and three licences were issued with retroactive provisions to legalize the operation of unlicensed ranches during the previous year.

There was an increase of 86,502 or 18.03% in the production of mink pelts on Ontario ranches in 1966 as compared to the previous year.

Field Services

The purpose of law enforcement is to prevent violations by encouraging the public to obey the regulations made to ensure good fish and wildlife management. These are based upon the biological requirements indicated from field studies, and the social needs of fair play and equitable use of such natural resources. Where persuasion and education fail, prosecution is necessary and a high standard of law enforcement is essential to meet these objectives.

To meet this challenge, a comprehensive training program for conservation officers has been established. Some 103 Department employees who enforce the game and fish laws received instruction from the Branch Law Enforcement Training Officer. More advanced instruction was provided for 25 officers attending the Fish and Wildlife Certificate Course at the Ontario Forest Ranger School, Dorset, by instructors from the Ontario Provincial Police Force and the Department. In addition, 16 Fish and Wildlife officers and biologists with supervisory responsibilities attended a three-week law enforcement training course at the Ontario Police College, Aylmer. Instruction in evidence, power and procedure of arrest, the Canada Evidence Act, The Game and Fish Act, the Fisheries Act, The Ontario Fishery Regulations, the Migratory Birds Convention Act and Regulations, and the Summary procedures as prescribed in the Criminal Code and the Ontario Summary Convictions Act, were provided.

The Conservation Officer staff, which includes some Supervisors and all those whose duties are actively engaged in enforcement in the field, number 250.

Registered convictions for the fiscal year 1966-'67 totalled 2,626. This is an increase of 279 over the previous year and is due in part to an increasing number of hunters and anglers in the field, an increase in the number of violations encountered and increased efficiency in the enforcement staff in obtaining convictions.

Over the past ten years, an average of 2,356 convictions have been recorded each year. In the year under review the average was exceeded by 270. The record for the past five years has been:

Table 19

	1962-'63	1963-'64	1964-'65	1965-'66	1966-'67
Number of Seizures	2,186	2,508	2,216	2,581	2,942
Number of Convictions	2,045	2,276	2,236	2,347	2,626
Cases Dismissed	66	68	95	64	93
Convictions by R.C.M.P. (under Migratory Birds Regulations)	34	18	19	30	58

About one-quarter of the prosecutions against anglers, hunters and trappers, amounting to 652 cases, were for angling, hunting or trapping without the authority of a licence. This is an increase over last year by 180 persons.

Evaluation of a law enforcement program is difficult. New laws and increased use of natural resources help to account for increased numbers of violations. Hunting or fishing without a licence is a violation for which there is little excuse, and may be a good measure of public tendency to violate the law.

A five-year comparison indicates that a higher than average frequency was experienced during the year:

Table 20

	1962-'63		1963-'64		1964-'65		1965-'66		1966-'67	
	No.	% Frequency	No.	% Frequency	No.	% Frequency	No.	% Frequency	No.	% Frequency
Fishing without Licence	81	4.0	146	6.4	145	6.6	106	4.6	204	7.7
Hunting without Licence	358	17.4	382	16.8	439	19.6	360	15.3	443	15.9
Trapping without Licence	10	0.5	24	1.5	19	0.9	6	0.2	5	1.2
Total	449	21.9	552	24.7	603	27.1	472	20.1	652	24.8

Offences other than those involving licences include:

Table 21

Fishing:

1. Angling with more than two lines	165
2. Possession of overlimit of fish	156
3. Taking fish by means other than angling	96
4. Taking fish during closed season	90
5. Possession of fish during closed season	58
6. Possession of spear	48

Hunting:

1. Possession of loaded firearm in vehicle	388
2. Hunting in prohibited hours and jacklighting	270
3. Possession of loaded firearm in motor boat	145
4. Hunting in closed season	79
5. Possession of game in closed season	36
6. Hunting protected birds	33

Assistance in the law enforcement program is provided by biologists, foresters, chief and deputy chief forest rangers and technicians who hold appointments as special conservation officers. There are also some 1,100 deputy conservation officers offering volunteer service in law enforcement. The Ontario Provincial Police work with our conservation officers and provide special assistance during the spring spawning of rainbow trout and walleyes. These co-operative efforts resulted in convictions both under The Ontario Fishery Regulations and The Liquor Control Act. The Royal Canadian Mounted Police provided increased assistance with enforcement of the Migratory Birds Convention Act and the Regulations.

Items required for evidence used in violations of The Game and Fish Act, The Ontario Fishery Regulations and the Migratory Bird Regulations are seized by the conservation officer at the time the accused is apprehended. Upon conviction, this equipment becomes the property of the Crown. The Minister may grant relief from forfeiture upon such terms as he deems just, and a majority of such items are restored to their former owners. This does not apply to items the possession of which may be illegal.

Articles which become the property of the Crown are sold at public auction. A total of $11,234.80 was realized from such sales.

HUNTING LICENCE EXAMINATIONS

Regulations were passed providing for conservation officers to become examiners of new applicants for a hunting licence under a uniform and standard set of examinations designated to reduce hunting accidents in the Province.

The Hunter Safety Training Program, formerly a responsibility of the Fish and Wildlife Branch, was transferred to the Operations Branch.

Conservation officers who were formerly hunter safety training instructors were relieved of this responsibility in view of their new role as examiners. Hunters may now select training from any source they choose. No examinations were provided during the year under review. It is not expected that the 20,000 new hunters recorded each year in Ontario will enter the program completely until 1968, when the examination becomes mandatory for all hunters seeking a licence for the first time.

FISHERIES SECTION

Fisheries section is responsible for the application of the principles of full, multiple and public use on a sustained yield basis to the fishery resources of the Province. The application of these principles involves an understanding of the resources and the organization of programs for its optimum harvest.

Progress in reaching the objectives of fisheries management was marked primarily by minor additions to staff and some reorganization, as well as redirection of emphasis of various programs. Perhaps most significant was the addition of a new Unit in the Fisheries Section to coordinate the lake survey program across the Province — an important part of the field program of the Districts but which has been unable to keep up to the necessary demand in recent years. The Unit now consists of a senior biologist, a fisheries management technician and a clerk.

At the same time, the Commercial Fisheries Unit, through adjustments in staff functions, was able to add a biologist to initiate a program for the development of quota management and more extensive fish sampling by the field staff. The policy of initiating programs directed at assisting the industry in exploring methods of catching fish, transportation of quality products, and processing was established in principle.

The addition of a Fisheries Management Unit to concentrate on fisheries problems on Lakes Temagami and Nipissing established a fifth such "intensive-study team" in a key fishery water. At the same time, the importance of District fisheries management officers was recognized, and two additional positions were created bringing the total number to thirteen.

The Fish Culturist training program previously directed to hatchery technicians was re-established and expanded to include additional fisheries management training. In addition to hatchery technicians, biologists, fishery management officers and conservation officers were offered the course to improve their technical background in fish culture and field management.

The program of modernizing and renovating the provincial hatchery system was marked by the beginning of reconstruction of the North Bay trout rearing station.

Game Fish and Hatcheries

This Unit is responsible for the planning and coordination of programs to develop and maintain the sports fishery including: production of hatchery fish stocks; control and distribution of stocks; stimulation of private hatchery and fish pond development; modernization of the hatchery system; application of new fish cultural techniques; assessment of utilization by angling, including the effectiveness of planting; establishing angling seasons; habitat improvement including lake reclamation and stream improvement; coordinating studies of fisheries problems and assessing results; acquisition and development of public fishing areas; providing information and promoting the sports fishery.

FISHERIES MANAGEMENT UNITS

(a) Kawartha Lakes: In May 1966, the Kawartha Lakes Management Unit started a three year trap-netting project in Rice Lake. The purpose of this study is to estimate the number of fish in the lake and determine growth rates, mortality and environmental factors affecting the fish population. The ultimate objective is to manage the fish populations and environment to provide the best possible return to the angler.

Also, in 1966, walleye were transferred from the Talbot River to augment the walleye in Canal Lake which are subject to potential winter kill each year as a result of a drawdown of the water levels.

(b) Lake Simcoe: In the fall of 1964, a management unit with headquarters at Sibbald Point Provincial Park, was set up to study and manage the fishery of Lake Simcoe. The main emphasis during 1966 was placed on summer and winter creel census. A new approach was taken to the open water creel census for Lake Simcoe. It was designed to sample specific areas for yellow perch, northern pike, lake trout and bass and to do so during the period of year when anglers could be expected to be present in large numbers. The winter fishing season of 1966-'67 was estimated at 70 days. The ice conditions were poor in January and early February, thereby shortening the overall fishing season. The total catch per unit effort decreased slightly from 1965, with lake trout and whitefish showing the greatest declines.

(c) Lake of the Woods: During the summer of 1966, the final year of the proposed five-year Lake of the Woods study, the eastern sector including Sabaskong and Whitefish Bay was investigated.

Field work extended from May 22 to October 21, 1966. Trap-net catches in the spring provided 582 walleyes, 10 lake trout, six whitefish and five maskinonge for tagging. By January 1, 1967, 23 walleyes, one lake trout and one maskinonge tags had been returned; all of these by anglers.

A parasitological study of the fishes of this sector was conducted with the cooperation of the Research Branch.

Future work on the lake will involve a quantitative creel census, depth and benthos stations for the portion of the lake in the Fort Frances District, spawning studies for some of the major species and the collection of aquatic vegetation from Lake of the Woods.

(d) Lake Temagami: In the spring of 1966, Lake Temagami was set up as a separate Fish Management Unit under the direction of a biologist, assisted by a fisheries management technician.

The major activities during 1966 included a creel census of summer angling. Results showed that 2,965 anglers fished 12,658 man-hours for a catch of 1,425 fish, or a return of about 0.11 fish per hour spent angling.

Also started in 1966 was a follow-up to determine the success of stocking lake trout yearlings. Fin clipped lake trout have been planted since 1961, with different fins being removed prior to planting each year. The earlier plantings are now expected to begin showing up in the angler's creel. Gill netting and limnological work also formed an integral part of the studies carried out by the Unit during its first year of operation.

(e) Rainy Lake: This Unit, consisting of one biologist and one summer student, was established in 1965 to study the fishery resources of Rainy Lake, to investigate the reports of declining angling success and to provide data upon which management could be based.

The work program was interrupted briefly in the spring of 1966 due to a change of the biologist in charge, however by late June the Unit was once again operational under the direction of a new biologist. The 1966 operation was devoted to distribution, age and growth studies of walleye and whitefish, and was concentrated on the north arm of Rainy Lake.

(f) Georgian Bay: A long term study initiated in 1962 to gather knowledge of the walleye of the Pointe au Baril area of Georgian Bay was continued in 1966. There were an additional 491 walleyes tagged during the spring and summer netting periods. Tag recoveries in 1966 numbered 846; of these, 753 were taken in Department nets, 76 returned by anglers, 13 received from commercial fishermen, and four recovered from dead fish.

Movements of fish support the belief that the Shawanaga Basin contains a relatively discrete population of walleyes and that there is no apparent spawning migration from commercial fishing grounds to the Shawanaga Basin during the spring.

PUBLIC FISHING AREAS

With increasing urbanization in southern Ontario and the need for more recreational areas, the Department has established four pilot public fishing areas — at Mount Pleasant, at the St. Williams Forestry Station, at Normandale and on the Jackson Forest Tract near St. Williams.

The ponds on these areas are stocked periodically with catchable-size fish throughout the fishing season, and are open to public fishing free of charge. The most popular site has been the Mount Pleasant Public Fishing Area. In its second year of successful operation in 1966, more than 28,500 anglers visited the site during the 20-week trout fishing season. These fishermen spent a total of 86,164 angler-hours to catch 26,173 trout, of which 10,488 were rainbow trout and 15,685 were brook trout.

SPECIAL PROJECTS

(a) Talbot River Walleye: The spawning run of walleye in the Talbot River has increased over the years. Since it is the only spawning area in Lake Simcoe now known to be used by walleye, it is of vital importance. This river is a part of the water-control system of the Trent Canal and is subject to water fluctuations which in recent years have been great. The river is a main source of spawn for the Department's walleye hatchery stock.

Arrangements were made in 1966 with the Department of Transport to maintain water flow during April and May, giving the walleye every possible opportunity to spawn and reproduce successfully.

(b) Mississagi Walleye Study: 1966 marked the final year of work in a study initiated in 1961 to determine the relative effects of angling and commercial fishing on the walleye population.

The angling success as earlier predicted showed a marked improvement in 1966. This improved fishing can be credited to two strong year classes that resulted from spawning in 1962 and 1963, and appeared in the fishery as three and four-year-old walleye. The results of this study indicated that commercial fishing has only a minor effect on angling success in comparison with the major effect of natural fluctuations in spawning success. There appears to be no reason to greatly restrict commercial fishing for walleye under present conditions.

(c) Bark Lake: A 10-year project initiated in 1965 is aimed at establishing whether extensive winter hydro drawdown of Bark Lake water is affecting the natural reproduction of the lake trout population. During the summer of 1966, a simultaneous intensive creel census was carried out on Bark and Aylen Lakes. Aylen Lake is similar in nature to Bark Lake but not subject to water drawdown, and the census there will act as a "control". During the latter years of this program, the use of such a "control" lake to discount natural angling fluctuations may assist in pointing up the precise influence of the hydro dam on the Bark Lake lake trout population.

(d) Water Quality Tests: Water samples from specific lakes are collected annually by field personnel and forwarded to the Ontario Water Resources Commission laboratories for analysis of total alkalinity, total dissolved solids and turbidity. Tests were carried out on 753 water samples in 1966 as part of the lake survey program.

The detection of pollution is another aspect of the water sampling carried on by the Department's field staff. When the presence of deleterious substances is suspected, water samples are taken and forwarded to the Ontario Water Resources Commission for analysis. In 1966, 87 such samples were analysed.

(e) Lake Reclamation — Lemke Lake: The reclamation of Lemke Lake, situated in Alice Township six miles from downtown Pembroke, was carried out jointly by the Department and the Pembroke Outdoor Sportsman's Club in May, 1966. In mid-June, brook trout were stocked and exceptional fishing has been experienced since.

(f) Lake Superior: Amendments to the Ontario Fishery Regulations and regulations made under the Game and Fish Act prohibited angling for lake trout in Lake Superior, except under the authority of a lake trout angling licence, issued free of charge and valid for a period of 30 days. The licensee was required to complete and return a creel census card attached to the licence within 15 days after the expiry of the licence.

The returns for 1966 show a decided increase in the number of lake trout harvested by a larger number of licensees. A total of 2,515 licences were issued and 1,561 lake trout were caught by anglers in 1966, compared to 858 licences issued and 124 lake trout caught in 1965.

(g) Commercial Fishing - Angling Conflicts: The policy of providing the maximum economic and social return from the fishery resources, causes, at times, some conflict between sports and commercial fisheries. The Department aims to make use of the resources, sometimes by sports fisheries, and in some locations and for some species by commercial fisheries, but preferably by both.

Complaints that sports fishing has been affected by the presence of commercial fishing are being investigated in several areas. A three-year investigation of the fishery in Sturgeon Lake, in the Sioux Lookout District, has begun in order to develop management ensuring the maintenance of quality angling as well as the utilization of commercial species not otherwise being harvested. The question of the affect of a commercial fishery during the spawning season on the strength of year classes of walleye in Georgian Bay, is under investigation. A similar investigation has just been completed in the North Channel.

On Lake of the Woods and Rainy Lake, similar conflict exists between the two fishing interests. Fisheries Management Units on these lakes have been directing their attentions to the solutions of the problems to provide for the most compatible utilization of the fishery resource.

LICENCES

Gross revenue from the sale of angling licences in Ontario is approaching three million dollars. Total sales in 1966 amounted to $2,971,295. Sales of all licences, including non-resident seasonal, non-resident three-day, non-resident organized camp, resident Provincial Park and resident Provincial Park organized camp, showed an increase. Sales of non-resident three-day licence continued to rise from 69,401 in 1963 to 151,373 in 1966. The increase in revenue from total licence sales this year was $124,178 or 4.3%, and constitutes one of the more substantial increases in recent years.

ANGLING REGULATIONS AND SUMMARY

Gradual consolidation of angling regulations were made in 1965 and 1966. Changes in angling zones were accomplished over the two-year period to simplify seasons sufficiently so that they could be illustrated on a map. In 1965, the Angling Summary was doubled in size from previous years, including more information for the sportsman. In 1966, the summary was doubled again in size and maps of the Province showing angling zones were included. For the first time anglers were able to clearly understand angling-season-areas formerly summarized only in print.

NET SECTION

The two Net Section staffs based at Port Arthur and Maple assisted District personnel in fisheries management work throughout 1966. Impounding gear (trap, pound and hoop nets) were provided and maintained for fisheries investigational work and spawn-taking operations. On some of the larger projects, net section personnel actively assisted district staff in the field work involved. In addition, the usefulness of impounding gear for commercial fishing was demonstrated by net section specialists.

FISH HATCHERIES

The production and planting of hatchery reared fish is an important part of the fisheries management program in Ontario. Some 17 hatcheries were operated in 13 districts during 1966. Fish species cultured include brook, rainbow, aurora and lake trout, hybrid splake, kokanee, whitefish, lake herring, maskinonge, walleye, largemouth and smallmouth bass.

Fish culture in Ontario has evolved from a practical art into an accurate science. The maintenance of records combined with knowledge and experience has enabled our personnel to predict such detailed information as weight gains over a period of time from food calorie content. Though many problems of diet and disease control remain unsolved, there is every indication that the rearing of fish can and will become a far more efficient operation. To realize the benefits of modern fish culture, it is necessary not only to up-date our rearing facilities but also to encourage and promote the technical training of hatchery staff.

One Federal and 15 Departmental employees were trained this year at a fisheries management course held at the University of Guelph. Fish culture and techniques form much of the basis of this course in fisheries management. Limited use was made of the Little Current hatchery during 1966. Its closure was planned to coincide with a regrouping of fish hatchery facilities on Manitoulin Island at the Sandfield station. The North Bay Trout Rearing station was closed in 1966 for a total renovation of hatchery and rearing facilities.

A new and modern hatchery building was completed at the Normandale Trout Rearing station. Included were the installation of tray-type incubators, reinforced plastic rearing troughs and a heat exchanger system for controlling the temperature of water supplied to the incubators.

Pre-engineering and planning were carried out for the addition of six large earthen ponds at the Chatsworth station. These ponds will be used in the production of the hybrid splake. Present plans provide for an annual production of 500,000 yearling splake from this station for the rehabilitation of Lake Huron.

Planning and pre-engineering work was initiated in connection with the development of the Thayer property at Sault Ste. Marie for the construction of an experimental station and a school of fish culture.

One policy was established prior to the end of the 1966-1967 fiscal year to mark, by fin clipping or tagging, all hatchery fish. Fish planted in the spring of 1967 were marked with the removal of the right pectoral fin. The primary aim of this procedure is to facilitate the assessment of hatchery plantings.

Concurrent with the importance of assessing the returns of hatchery fish to the angler is a cost analysis of our fish hatchery production figures. Example:

Table 22
CHATSWORTH TROUT REARING STATION 1966-1967

SPECIES	Production in Pounds	Food Conversion	Food Cost Per Pound Produced
Brook trout	41,429	2.35	$0.34
Lake trout	4,050	4.42	0.89
Kokanee	489	5.20	1.12
Rainbow trout	25	5.80	0.70

Mean food cost to produce one pound of fish at this station was $0.39. The total cost to produce one pound of fish, including all of the above species, was $1.39. Production from this station for the year 1966-1967 totalled 45,993 pounds or 1,323,541 fish including fingerlings and yearlings of four species.

The use of plastic bags in the transfer of hatchery fish was first used as a management technique in 1966 by the Sault Ste. Marie District. In 1965, the district's inland brook trout plantings required 65 hours of Otter aircraft flying time. In 1966, similar numbers were distributed in 11½ hours, thus realizing a substantial saving. Promotion of the technique within the Department has stimulated several other Districts to attempt its implementation in their fish planting procedures.

During the past fiscal year, the first of the genetically selected hybrid splake were set aside for potential brood stock at Codrington Trout Rearing Station. These fish will ultimately be transferred for culture to the Chatsworth Trout Rearing Station.

In line with the long term rehabilitation of the lower Great Lakes, kokanee egg stocks were imported into Ontario. Two and a half million walleye eyed-eggs were exchanged for kokanee eggs from Montana and Colorado. Two million brook trout eyed eggs were also exchanged with British Columbia for an additional lot of kokanee eggs. Although small and premature (two years of age), the first spawning runs of kokanee were seen in the waters of Lake Huron and Ontario in the fall of 1966.

Lake trout eggs were also received on an exchange basis from Clearwater Lake (Atikemeg). Manitoba provided Ontario with 200,000 lake trout eyed eggs in exchange for 100,000 brook trout eyed eggs and 50,000 maskinonge fry supplied by Dorion and Deer Lake hatcheries respectively.

The distribution of hatchery fish to Ontario waters for public use during the fiscal year 1966-1967 is outlined in Table 23. This year, approximately 47,032,557 fish of all species were cultured for current or future plantings, primarily for the sport fishery. For the distribution of hatchery reared fish, tabulated by species, for the years 1962 through 1966 see Table 24.

A number of agencies were provided with approximately 212,000 fish, ranging from green eggs to yearlings, for research and educational purposes. Such agencies include the Fisheries Research Board of Canada; the University of Toronto; the University of Western Ontario; the University of Guelph; McMaster University and the Department of Lands and Forests Research Branch.

Programs conducted by these agencies, and for which hatchery fish were used, include the sea lamprey control program; lethal temperature studies; light as it affects the spawning cycle; experimental research in embryology, morphology, metabolism, parasitology, and pathology; and long term studies in population dynamics, fish culture techniques and planting methods as they affect the return of hatchery fish to the angler.

The Dorion and Tarentorus Trout Rearing Stations again met Ontario's commitment of yearling lake trout for Lake Superior as the Province's part of the International rehabilitation program. Those fish from Tarentorus (Sault Ste. Marie) station were planted between Corbeil Point and Goulais Bay (100,000), and from Otter Head to the Michipicoten River (125,000). Dorion (Port Arthur) fish were planted in Jackfish Bay (75,000), Nipigon Bay (75,000) and between Magnet Point and Fluor Island (75,000).

HATCHERIES (PRIVATE)

In 1966, 30 private fish hatcheries were licenced to sell fish for restocking, and 32 to sell for human consumption. Ontario regulates private fish hatcheries in order to control the distribution of fish within the natural watersheds and to prevent the sale and movement of diseased fish. The primary species dealt with were brook and rainbow trout, largemouth and smallmouth bass.

A group of private hatchery operators formed the Canadian Fish Farmers Association in 1966, the first Canadian group of its kind.

Table 23
FISH DISTRIBUTION FROM ONTARIO PROVINCIAL HATCHERIES FOR 1966

HATCHERY	Brook Trout	Lake Trout	Rainbow Trout	Largemouth Bass	Smallmouth Bass	Maskinonge	Whitefish	Walleye	Splake
Chatsworth	19,940 Fg 230,341 Y	5,900 Y	5,030 Y	—	—	—	—	—	—
Codrington	23,630 Y		17,300 Fg 3,150 Y	—	—	—	—	—	—
Deer Lake	55,200 Y 325,400 Fg	134,500 Y	9,000 Y	—	—	1,303,112 F	—	—	—
Dorion	17,385 Y 385 2 Yr 4,150 A 108,750 Fg	259,980 Y 77,581 Fg	—	—	—	—	—	—	—
Hill Lake	116,500 Y 23,100 2 Yr 1,100 A	97,000 Y 312 A	65,480 F 13,520 Fg	—	—	—	—	—	—
Little Current	—	—		—	—	—	19,845,000 F	—	—
Midhurst	47,230 Y	—	7,000 Y	—	—	—	—	—	—
Normandale	32,350 Y	—	100,000 EE 47,440 Y	—	—	—	—	—	—

Table 23
FISH DISTRIBUTION FROM ONTARIO PROVINCIAL HATCHERIES FOR 1966 (Continued)

HATCHERY	Brook Trout	Lake Trout	Rainbow Trout	Largemouth Bass	Smallmouth Bass	Maskinonge	Whitefish	Walleye	Splake
North Bay	112,750 Y	80,000 Y	—	—	—	—	—	—	—
Pembroke	26,400 Fg 229,486 Y	11,900 F	—	—	—	—	—	—	—
Port Arthur	—	90,000 Fg	—	—	—	—	—	—	—
Sandfield	150,500 Y	49,450 Y	1,000 Y	—	36,000 F 55,000 Fg 160 A	—	—	—	—

Table 24
FISH DISTRIBUTION FROM ONTARIO PROVINCIAL HATCHERIES 1962 TO 1966

SPECIES OF FISH	NUMBER OF FISH 1962	1963	1964	1965	1966
BASS, LARGEMOUTH					
Fry	55,000	45,000	112,000	81,000	41,500
Fingerling	112,120	92,550	90,650	107,500	147,000
Yearling and Adult	20	—	—	—	—
BASS, SMALLMOUTH					
Fry	147,000	134,000	52,000	58,000	36,200
Fingerling	177,300	287,700	239,450	230,700	215,500
Adult	291	316	290	165	160
GRAYLING, ARCTIC					
Adult	500	—	275	—	—
MASKINONGE					
Fry	2,970,000	1,870,000	1,530,000	1,850,000	1,303,112
Fingerling	23,550	27,150	26,300	24,600	—
Yearling	—	—	—	15	—
SALMON, ATLANTIC					
Eyed Eggs	53,280	—	—	—	—
Fry	—	1,250	15,400	—	—
Yearling	—	4,520	—	—	—
Adult	—	—	106	—	—
WALLEYE					
Eyed Eggs	20,500,000	7,200,000	14,000,000	15,600,000	10,000,000
Fry	8,994,000	11,440,000	1,353,000	—	8,232,000
Fingerling	201,070	217,000	—	55,655	—
KOKANEE					
Eyed Eggs	—	—	—	683,300	923,200
Fry	—	—	—	1,608,344	942,911
Fingerling	—	—	—	287,680	—
SPLAKE					
Yearling	111,792	114,100	87,650	21,200	69,000
2 Years	—	2,400	11,645	15,700	—
Adults	—	—	—	—	44
TROUT, ALBINO					
Yearling	—	5,303	3,873	4,380	—
TROUT, AURORA					
Fry	—	—	582	—	—
Fingerling	1,347	—	—	4,000	—
Yearling	—	—	682	—	—
TROUT, BROOK					
Eyed Eggs	493,500	574,580	400,000	673,900	—
Fry	—	—	8,000	—	—
Fingerling	651,300	391,570	505,750	600,275	480,490
Yearling	1,655,249	1,883,478	1,725,755	1,818,891	1,599,092
2 Years	75,445	72,522	111,920	69,216	23,485
Adults	—	—	—	—	5,410
TROUT, LAKE					
Eyed Eggs	—	—	20,000	—	—
Fry	13,000	—	—	—	11,900
Fingerling	240,300	185,800	690	224,800	395,081
Yearling	988,732	949,754	981,806	826,865	1,335,830
2 Years	718	5,510	535	9,340	—
Adults	—	—	—	—	312

Table 24

FISH DISTRIBUTION FROM ONTARIO PROVINCIAL HATCHERIES 1962 TO 1966 (Continued)

SPECIES OF FISH	NUMBER OF FISH 1962	1963	1964	1965	1966
TROUT, RAINBOW					
Eyed Eggs	—	—	—	—	100,000
Fry	—	—	—	65,000	—
Fingerling	60,300	3,000	140,500	11,750	30,820
Yearling	291,158	173,152	318,890	269,285	125,510
2 Years and older	8,650	11,380	14,553	62,750	10,000
WHITEFISH					
Eyed Eggs	—	—	—	—	—
Fry	46,575,000	46,350,000	27,090,000	24,030,000	19,845,000
HERRING					
Eyed Eggs	—	—	—	—	1,150,000
Total	84,400,622	72,042,035	48,842,302	49,294,311	47,023,557

SUMMARY OF THE FISH DISTRIBUTED FROM LICENCED PRIVATE HATCHERIES IN ONTARIO DURING 1966

PRIVATE HATCHERY	SPECIES DISTRIBUTED	AGE	No. of Fish Transferred	No. of Permits Issued
Francis A. Olde, Beaverbrook Trout Hatchery, R.R. 4, St. Thomas	Brook Trout	Fingerlings	800	
		Yearlings	400	
		Adults	250	
				30
	Rainbow Trout	Fingerlings	3,940	
		Yearlings	675	
		Adults	965	
Caledon Mountain Trout Club, Noreen Neilson, Secretary, Inglewood	Brook Trout	Fry	41,500	
		Fingerlings	1,000	
		Yearlings	1,000	
		Adult	25	
				26
	Rainbow Trout	Eggs	18,000	
		Fry	44,000	
		Fingerlings	1,050	
Alfons de Coensel, R.R. 1, Simcoe	Brook Trout	Adults	375	
				4
	Rainbow Trout	Adults	60	
Carmen Denton, R.R. 1, Curries	Largemouth Bass	Fingerlings	50	
		Yearlings	1,337	
				5
Howard Gallaugher, R.R. 2, Hornings Mills	Brook Trout	Yearlings	100	
		Adults	220	
				5
	Rainbow Trout	Adults	200	
Rene Goossens, Goossens Trout Farm Limited	Brook Trout	Fingerlings	11,500	
		Yearlings	830	
		Adults	1,100	
				32
	Rainbow Trout	Fingerlings	55,800	
		Yearlings	950	
		Adults	2,010	
Duncan Hossack, Hossack Hatchery, 246 Dundas Street, Thamesford	Brook Trout	Yearlings	500	
		Adults	500	
				10
	Rainbow Trout	Fingerlings	2,200	
		Yearlings	1,100	
		Adults	4,746	
D. E. Tiffin, Humber Springs Hatchery, R.R. 5, Orangeville	Brook Trout	Fry	10,900	
		Fingerlings	3,400	
		Yearlings	750	
		Adults	775	
				20
	Rainbow Trout	Fingerlings	1,150	
		Yearlings	375	
Henry Kemp, R.R. 2, Colborne	Brook Trout	Fingerlings	900	17
		Yearlings	3,100	

SUMMARY OF THE FISH DISTRIBUTED FROM LICENCED PRIVATE HATCHERIES IN ONTARIO DURING 1966 (Continued)

PRIVATE HATCHERY	SPECIES DISTRIBUTED	AGE	No. of Fish Transferred	No. of Permits Issued
K. V. Tiffin, Midhurst Trout Hatchery, R.R. 1, Midhurst	Brook Trout	Fingerlings	14,000	8
		Yearlings	2,200	
		Adults	175	
W. McCutcheon, R.R. 1, Rockwood	Rainbow Trout	Adults	700	1
Ray Olan, Box 63, Campbellville	Rainbow Trout	Fingerlings	1,100	17
		Yearlings	819	
		Adults	122	
James Alexander, Ozark Lodge, R.R. 3, Cobourg	Brook Trout	Fingerlings	1,850	6
		Yearlings	1,200	
Ivan Cryderman, Rainbow Ranch, Box 9 Milton	Rainbow Trout	Yearlings	3,400	23
		Adults	3,312	
Donald Barnes, St. George Trout Farm, R.R. 1, St. George	Brook Trout	Yearlings	500	
	Rainbow Trout	Fingerlings	6,500	20
		Yearlings	2,190	
		Adults	1,925	
Shadowbrook Trout Hatchery, R.R. 2, Hornings Mills	Brook Trout	Fingerlings	191,900	
		Yearlings	26,250	
		2-year-olds	4,472	91
Russell C. Coulson, R.R. 3, Campbellville	Rainbow Trout	Fingerlings	145	
		Yearlings	200	4
Fred Trimborn, Spring Valley Hatchery, R.R. 2, Petersburg	Brook Trout	Fingerlings	1,150	
		Adults	600	
	Rainbow Trout	Fingerlings	9,000	16
		Yearlings	1,900	
		Adults	75	
Harold White, Box 201, Aylmer West	Largemouth Bass	Adults	71	
	Bluegills	Fingerlings	225	6
James Howgego, Woodstock Trout Hatchery, 260 Mill Street, Woodstock	Brook Trout	Yearlings	100	
	Rainbow Trout	Yearlings	200	2

A policy has been established in Ontario to limit the importation of fish and spawn in order to control the spread of parasites, diseases, and undesirable species. However, a limited number of permits were issued in 1966 for the importation of fall-spawning rainbow trout eggs. The source of the eggs in the western United States was designated because the hatchery has no record of disease organisms that have not yet appeared in Ontario. The sole reason for allowing this import was because there were inadequate stocks of fall-spawning rainbow trout in Ontario. For the distribution of fish raised by private hatcheries for restocking purposes in 1966 see Table 25.

Commercial Fish

This Unit is responsible for the issuance of commercial fishing licences as well as accounting for licence fees; collection and compilation of statistics of the catch; initiating and directing programs for monitoring of fish stocks through sampling systems; establishment of seasons, quotas and conditions for fishing; development of programs to assist the industry in catching, processing, handling and marketing fishes.

LICENCING

Licencing practices and policies applying to commercial fisheries are continuously being reviewed and revised in light of information on current biologic and economic conditions. In July of 1966, a policy statement respecting the licensing of fisheries on Lake Huron was announced. It provided for the expansion of existing fisheries; the elimination of licences under which the fishing privileges were not being exercised; and the restriction of entry into the fishery through new licensing. Previous provisions for transferring a fishery and for experimental fishing were retained.

The objective was to strengthen the fishery resource management program through which the active Lake Huron-Georgian Bay fishermen would have a better opportunity to attain a level of income comparable to that enjoyed by those employed in other industries in the community. At the same time, the objectives of allowing full and multiple resource use while ensuring continuing optimum yields continued as the basic frame of reference.

ORGANIZATION CHANGES

The Commercial Fish Unit was enlarged in 1966 by the addition of a classification for a third biologist. The position was filled in 1967. The new position will allow attention to be directed more fully to the program of data collection from commercial catches and more reliable quota decisions. The use of quotas as a means of fixing the commercial harvest to an optimum level is increasing. Information obtained by examining the species, size and age composition of commercial catches of fish will aid in setting quotas. It also provides a basis for other management decisions.

FISHERIES DEVELOPMENT PROGRAMS

Instruction in modern fishing techniques and in the proper care of fish was provided Indians in Northern Ontario under the Federal-Provincial Resources Development Agreement

in 1966. Maintenance and repair of nets and their efficient use was demonstrated, along with the recommended methods of icing and packing fish products. The work is expected to raise the level of efficiency of operation, and to increase the quality and the value of the fish. The aim is to help commercial fishermen in northern communities achieve a better living from the resource.

At Lake of the Woods, personnel from the Regional Net Section at Port Arthur demonstrated trap nets for a third season. Commercial fishermen, who have traditionally used gill nets, were acquainted with the design and use of this type of impounding net. At the same time, its feasibility for use in Lake of the Woods was tested further. Many fishermen were impressed with the effectiveness of the trap net and some acknowledged their intention of converting their present fisheries to this form of gear. The increasing use of trap nets in lieu of gill nets is expected to have a beneficial effect on relations between the various interests who depend on the fishery to provide either profit or recreation. Competition for space or for particular species can be materially reduced where trap nets can be employed.

Initial steps were taken to develop programs for exploratory trawling in Lake Huron, and for the granting of technical and financial assistance in pilot studies carried out by the fishing industry in areas of fish transport and processing. The decision to expand projects in these fields was based upon the need to encourage the establishment of markets for abundant but, presently, little used species in Ontario waters, and to develop modern fisheries by which these fish can be taken efficiently and profitably.

In 1966, the Department maintained a bait fish market intelligence service in southern Ontario through which information on supplies was collected from wholesalers of bait and conveyed to dealers looking for expanded or new sources of supply. The wholesaling side of the bait fish industry has developed significantly in recent years and may be credited with a major portion of the $1.3 million in sales recorded in 1966. Wholesaling enterprises, with their greater capitalization in catching and holding equipment and facilities, have contributed materially to much needed continuity in bait fish supplies. They had not been fully effective in making fish available because of lack of contact with the widespread retail outlets. The market intelligence service has successfully eliminated much of this problem by introducing the wholesalers to dealers.

A bait fish workshop, which afforded persons in the industry an opportunity of obtaining technical advice from fish culturists and biologists, was conducted. Instruction was given in capturing techniques, handling procedures, holding and transportation methods and disease treatment. In addition, the fundamentals of culturing bait fish were discussed. Further advice and assistance was provided by an experienced fish culturist who visited sites of operation, inspected facilities and examined fish for disease at intervals during the season.

REGULATIONS

Regulations requiring the holder of a commercial fishing licence to report his fishing activity each month were amended in 1966. Reports were required to be submitted to field offices instead of Fish and Wildlife Branch seven days earlier, on the 8th of each month. After preliminary checking, the reports are forwarded to the Commercial Fish Unit for coding and data processing. As a result of these changes, information needed for the administration of quotas and for other management purposes became available to Departmental personnel at an earlier date, and reliability was increased. Unnecessary delay in the preparation of tabulations and summaries of fishing statistics was removed.

Monofilament gill nets, which have been found to be more efficient than nets constructed with woven nylon fibres, were banned from Lake Ontario at the request of the Eastern Lake Ontario Commercial Fishermen's Association. In this instance, the fears of the fishermen that the gear would be too efficient in their whitefish fishery was the basis for the action.

Development and expansion of the bait-fish industry led to a change in licensing regulations and a resultant fee increase in 1966. For the first time, all bait-fish fishermen were required to obtain a bait-fish dealer's licence before live bait fish, taken under the authority of a seine net, dip net or trap licence, were sold. As a result of this change, the number of dealer's licences more than doubled over the previous year. The regulations with respect to the use of dip nets to take coarse fish for personal use were amended for 1966, allowing holders of the licence to harvest whitefish or herring in October, November or December from waters designated in the licence. This permission is not granted for waters in which commercial fishing for whitefish is carried out.

The Department did not introduce regulations to restrict taking of kokanee. This new introduction into parts of Lake Huron and Lake Ontario began to show evidence during the year of successful survival from plantings made two years earlier. It was considered essential to obtain maximum information about this exotic species before inaugurating any restrictions on its capture.

PROJECTS

Measurements and scale samples were obtained from several thousand walleye and whitefish taken in commercial nets, following the implementation of commercial catch inspections by the Fish and Wildlife staff on Lakes Erie, St. Clair and Huron. Information concerning the abundance, growth, mortality and reproduction of fishes thus obtained has value in determining proper management measures. It is planned that this program will be further developed on these lakes and extended to other major commercial fisheries.

Attention was focused during the year to solution of problems in the marketing of Ontario fish and fish products. A special study was conducted on the subject of benefits to the industry arising from a proposed licensing of fish dealers in Ontario. Staff worked on an inter-provincial committee considering details of a fish marketing organization as proposed by the Royal Commission on Freshwater Fish Marketing, and the subject was brought before the fishery. In Lake Erie, the Prices Support Board began a one-year price support program placing a floor price of 10 cents per pound on yellow perch. The program was later extended to include all Ontario produced yellow perch.

THE COMMERCIAL FISHERY

The fishery produced over 56 million pounds of fish in 1966, worth nearly six million dollars to the primary producers. Total capital in the fishery was valued at over 10 million dollars. As a result of Departmental policies, the total number of fisheries continued to decline, with the number of licences down to 1,822 from 1,881 in 1965. Reduction in the number of fishing enterprises along with increased catch resulted in a slight increase in the average earning per fishing unit.

Fisheries Inventory

This Unit is responsible for the development of an efficient inventory of the waters of the Province; for coordinating and enlarging the province-wide lake and stream survey programs; for establishing data retrieval and analysis systems for the use of inventory information for management purposes, and for the dissemination to the public and other agencies.

PROJECTS

It was possible to accomplish much in the way of planning during the short period the Unit was functional in the 1966-1967 fiscal year. The groundwork was laid for a data processing system to handle data from over 3,000 lakes which have

been surveyed to date. A start was made on standardizing lake survey techniques and equipment. The Unit also began preliminary work for the rating of sport fishing lakes under the A.R.D.A. C.L.I. program. The sport fish capability classification of lakes embraces all lakes in the A.R.D.A. areas, involving 14 of the 22 administrative Districts. Proposals for making lake maps and survey information available to the general public was investigated, and preliminary plans made for the drafting of suitable material.

A lake survey manual was prepared for use by the field staff, outlining minimal requirements for lake surveys and bringing up-to-date the methods by which biological, chemical, and physical information should be obtained and recorded. The testing of the manual by field parties for effective use in the field was followed by evaluations after the field season was complete.

Three teams of two sudent biologists each were assigned to lake survey work in the Lindsay, Sault Ste. Marie and Port Arthur Districts to augment the programs already established by the field staffs. These teams were able to survey an additional 38 lakes during a four-month field season.

Indian Resource Development

This Unit is responsible for the administration and coordination of the Federal-Provincial Resources Development agreement; development of programs for Indian-use of the resources; liaison between Indians, Indian Affairs Branch and the Department.

The Federal-Provincial Resources Development Agreement between the Department of Lands and Forests and the Indian Affairs Branch became effective April 1st, 1962. The agreement is designed to improve the livelihood of persons resident in the remote underdeveloped areas of Ontario, most of whom are Indian, and to develop and manage the renewable natural resources on which these residents depend for all or a substantial part of their livelihood.

The agreement applies to all matters relating to resource development, management, and harvesting and might include commercial fishing, fishing and hunting for domestic use, tourism, wild rice, forestry, big game surveys, park development and trapper development.

In order to set up and carry out the program, meetings are held annually with representatives of the Department of Lands and Forests, Indian Affairs Branch and Indian Band representatives. The projects are planned and carried out by the District staff of the Department of Lands and Forests.

Table 25
TOTAL DISTRIBUTION FROM LICENCED PRIVATE HATCHERIES

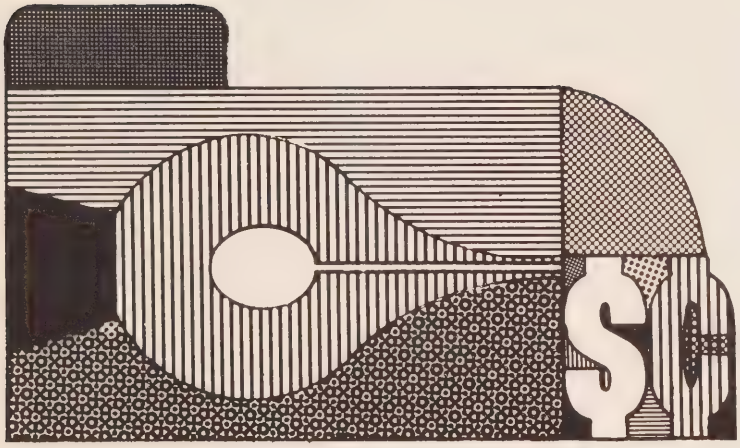
Brook Trout	52,400	Fry
	226,500	Fingerlings
	36,930	Yearlings
	8,492	Adults
Total	324,322	
Rainbow Trout	18,000	Eggs
	44,000	Fry
	80,885	Fingerlings
	11,809	Yearlings
	14,115	Adults
Total	168,809	
Largemouth Bass	50	Fingerlings
	1,337	Yearlings
	71	Adults
Total	1,458	
Bluegills	225	Fingerlings
Total	225	
GRAND TOTAL	494,814	

Total number of permits issued: 343

Table 26
ONTARIO DEPARTMENT OF LANDS AND FORESTS
STATISTICS OF THE FISHING INDUSTRY IN THE PUBLIC WATERS OF ONTARIO
FOR THE YEAR ENDING DECEMBER 31, 1966

SPECIES	QUANTITIES OF FISH TAKEN (in pounds) Lake Ontario	Lake Erie	Lake St. Clair	Lake Huron	Georgian Bay	North Channel	Lake Superior	Northern Inland	Southern Inland	Total Catch	Total Value
Blue Pickerel	—	8	—	—	—	—	—	—	—	8	$ 2.00
Bullhead	97,217	8,151	8,790	—	—	—	—	58,160	175,403	347,721	59,734.66
Carp	301,623	89,794	325,482	43,401	21,399	5,277	—	260	149,512	936,748	79,153.31
Catfish	25,988	158,683	48,297	6,811	17,568	—	—	—	16,135	273,482	69,040.75
Chub & Tullibee	—	—	—	652,614	285,503	—	12,129	314,822	—	1,265,068	174,952.74
Dogfish	2,137	8,313	525	—	—	—	—	—	13,120	24,095	532.51
Eels	143,098	131	—	—	—	—	—	—	6,991	150,220	35,496.17
Goldeye	—	—	—	—	—	—	—	6,897	—	6,897	1,846.00
Lake Herring	36,052	117	—	3,721	2,603	639	1,134,988	5,712	—	1,183,832	62,640.27
Lake Trout	—	—	—	77	12	32	108,364	65,647	—	174,132	74,062.95
Ling	—	—	—	—							
Menominee	—	—	—	13,285	30,187	3,729	7,829	2,806	—	57,836	9,928.05
Northern Pike	21,787	1,420	14,352	438	6,992	20,486	3,190	934,800	1,652	1,005,117	84,962.05
Perch (Yellow)	153,995	20,697,658	36,049	151,954	62,949	15,620	8,685	19,692	4,833	21,151,435	1,912,822.55
Rock Bass & Crappies	46,423	50,699	62,692	41	—	—	3,485	339,276	412	343,173	3,064.85
Saugers	—	—	156	31	15	522	—	99,553	11,481	271,411	60,417.45
Sheepshead	20,665	939,748	10,941	83,185	1,830	—	7,648	51,224	128	59,202	12,920.25
Smelt	141,135	15,913,984	—	1,051	82	—	—	281	1,287	1,057,937	16,074.91
Sturgeon	1,908	839	11,322	2,598	1,418	15,743	1,549	43,029	7,317	85,723	104,683.64
Caviar	—	28	7	182	52	32	—	1,116	5	1,422	5,651.90
Suckers	23,525	58,934	67,157	96,329	68,367	40,190	28,733	889,470	33,318	1,306,023	22,456.67
Sunfish	125,612	1,708	43,061	—	—	—	—	—	82,634	253,015	28,812.48
Turtles	1,116	—	—	—	—	—	—	—	—	1,116	93.00
Walleye	44,192	991,313	249,451	217,882	40,564	19,348	376,940	2,047,603	—	3,987,293	1,620,905.10
White Bass	19,095	1,756,888	19,695	7,250	254	—	—	921	1,829	1,805,932	350,077.70
White Fish	57,258	6,218	—	347,512	156,627	75,056	133,566	1,975,976	55,905	2,812,118	707,029.07
White Perch	172,467	—	—	—	—	—	—	—	1,828	174,295	13,185.17
Mixed "Scrap" & "Animal Food"	189,722	740,944	40,804	329,208	54,433	12,249	19,280	153,170	12,729	1,552,539	11,690.49
Total Catch:	1,625,015	41,425,578	938,781	1,957,570	750,855	208,923	1,846,386	7,010,415	580,519	56,344,042	
Total Value:	$220,006.65	$3,104,813.49	$238,526.20	$465,637.74	$170,791.83	$73,901.68	$326,588.22	$1,313,915.05	$80,484.97		$5,994,665.83

ACCOUNTS BRANCH



OBJECTIVES

1. To provide a complete financial management service to the Department.
2. To maintain a system of property taxation in unorganized areas of the Province.
3. To perform administrative services assigned.

ORGANIZATION

Accounts Branch is divided into units with duties and responsibilities as follows.

Accounting: Supervision of accounting for entire Department; preparation of claims under Federal-Provincial agreements; compilation of costing reports; procedural control and safe keeping of assets; financial liaison with Treasury Board, Provincial Auditor, and other Government Departments and agencies.

Revenue: Collection of revenue; maintenance of accounts receivable; supervision of accountable warrant funds; control of collateral securities; issue of angling and hunting licences and park permits.

Expenditure: Preparation of payrolls; internal check and payment of accounts payable; processing of refunds; preparation of data for Public Accounts.

Budget Preparation and Control: Compilation of estimates and forecasts; expenditure reporting and control.

Finance and Cost Analyses: Financial evaluation of plans; preparation of statistical and financial reports.

Accounting Systems and Procedures: Development of accounting systems; preparation of accounting procedural manuals; development of costing systems.

Land Tax Administration: Administration of Provincial Land Tax Act; assessments and appeals.

Internal Audit: Review and appraisal of accounting, financial and operational controls.

Systems and Procedures: Provide systems improvement program for entire Department.

General: Data processing; addressograph and mail services.

FINANCIAL REPORT

For Year Ended March 31st, 1967

1. CASH RECEIPTS AND DISBURSEMENTS

The following shows the results of operations for the year:

Total—Cash Disbursements	$42,212,898.28
Cash Receipts	27,417,794.21
Excess of Disbursements over Receipts	$14,795,104.07

2. COMPARISON OF RECEIPTS AND DISBURSEMENTS WITH THOSE OF THE PREVIOUS TWO YEARS

(a) Receipts Branch

	1965	1966	1967
Provincial Land Tax	$ 1,440,259.	$ 1,528,775.	$ 1,772,838.
Fish and Wildlife	5,729,078.	6,153,301.	6,741,700.
Forest Protection	136,012.	98,671.	113,545.
Lands and Surveys	1,024,250.	1,050,480.	1,470.184.
Parks	1,335,214.	1,884,935.	2,103,496.
Timber	14,112,981.	15,363,949.	14,980,397.
Other	264,369.	256,243.	235,634.
	$24,042,163.	$26,336,354.	$27,417,794.

(b) Disbursements:

Chargeable to Ordinary Account	$28,667,274.	$28,528,699.	$36,307,310.
Chargeable to Capital Disbursements	1,562,776.	3,893,760.	5,905,588.
	$30,230,050.	$32,422,459.	$42,212,898.

Statement 1

STATEMENT OF RECEIPTS AND DISBURSEMENTS
For Year Ended March 31st, 1967

RECEIPTS

MAIN OFFICE			
Provincial Land Tax		$1,772,837.83	
Sale of Maps, Publications, etc.		136,659.53	$ 1,909,497.36
FISH AND WILDLIFE BRANCH			
Licences, Royalties and Sundry (see Statement No. 3)			6,741,700.62
FOREST PROTECTION BRANCH			
Forest Protection Section:			
Recovery of Fire Fighting Costs and Miscellaneous		$ 81,666.65	
Air Service Section:			
Flying Fees		31,878.03	113,544.68
LANDS AND SURVEYS BRANCH			
Lands Section:			
Land Sales (Capital)		$ 732,281.38	
Land Rentals: Leases and Licences of Occupation		346,762.17	
Perquisites — Rentals		177,453.17	
Miscellaneous		11,659.25	
Park Rentals — Leases and Licences of Occupation:			
Algonquin	$ 14,235.87		
Rondeau	14,391.33		
Presqu'ile	2,775.00		
Long Point	848.30		
Sundry Parks	2,014.35	34,264.85	
Summer Resort Roads — Recovery of Construction Costs (Capital)		17,013.81	
Surveys Section:			
Recovery of Survey Fees		150,750.00	1,470,184.63
PARKS BRANCH			
Parks Concessions:			
Rentals		$ 105,670.39	
Permits (All Parks)			
Vehicle	$1,024,315.00		
Campsite	935,513.25		
Boat	12,810.00		
Guide	5,100.00	1,977,738.25	
Miscellaneous		20,087.01	2,103,495.65
TIMBER BRANCH			
Timber Section (see Statement No. 2)			
Timber Dues, Bonus, etc.		$14,566,469.59	
Logging Roads — Recovery Construction Costs (Capital)		307,039.21	
Reforestation Section:			
Sale Nursery Stock		106,888.30	14,980,397.10
FOREST RANGER SCHOOL			
Tuition Fees			16,051.39
GOVERNMENT OF CANADA			
Ordinary:			
Federal-Provincial Forestry Agreement	$1,180,039.95		
Federal-Provincial Resources Development Agreement	95,230.48		
Technical Vocational Training Agreement	118,040.47	$1,393,310.90	
Capital:			
Federal-Provincial Forestry Agreement	$ 475,000.01		
Agricultural Rehabilitation and Development Act	73,017.70	548,017.71	1,941,328.61
			$29,276,200.04
GROSS RECEIPTS			
Deduct — Reimbursements of Expenditures:			
Ordinary:			
Federal-Provincial Forestry Agreement (see Contra)		$1,175,017.99	
Resources Development Agreement (see Contra)		90,467.18	
Technical Vocational Training Agreement (see Contra)		117,920.65	
Capital:			
Federal-Provincial Forestry Agreement:			
Logging Roads	$ 105,166.21		
Forest Access Roads	369,833.80	475,000.01	1,858,405.83
			$27,417,794.21

NET RECEIPTS			
Excess of Disbursements over Receipts			14,795,104.07
			$42,212,898.28

DISBURSEMENTS

MAIN OFFICE			
Minister's Salary — Statutory		$ 12,000.00	
Salaries	$1,437,623.17		
Travelling Expenses	49,973.96		
Maintenance and Operating	236,812.35	1,724,409.48	
Public Information and Education		232,566.99	
Damages, Other Claims, etc.		5,429.00	
Workmen's Compensation Board		155,320.17	
Annuities and Bonuses to Indians		37,424.00	
Unemployment Insurance		88,938.37	
Advisory Committee to Minister		2,300.87	
Grant to Ontario Forestry Association		10,000.00	
Grant to Canadian Council of Resource Ministers		41,656.00	$ 2,310,044.88

BRANCHES

FISH AND WILDLIFE			
Salaries	$ 405,550.73		
Travelling Expenses	36,542.56		
Maintenance and Operating	126,573.36	$ 568,666.65	
Grants:			
Jack Miner Migratory Bird Foundation, Inc.	$ 28,400.00		
Thomas N. Jones	300.00		
Ontario Fur Breeders' Association, Inc.	5,000.00		
Ontario Council Commercial Fisheries	5,000.00		
Ontario Trappers' Association	5,000.00	43,700.00	
Wolf Bounty		59,084.00	671,450.65
FOREST PROTECTION			
Salaries		$ 199,960.64	
Travelling Expenses		12,260.62	
Maintenance and Operating		19,974.05	232,195.31
LANDS AND SURVEYS			
Salaries	$ 586,216.10		
Travelling Expenses	10,966.22		
Maintenance and Operating	25,040.61	$ 622,222.93	
Land Surveys		617,001.06	
Storage Dams — Control and Maintenance		4,229.25	
Grant — Association of Ontario Land Surveyors		200.00	1,243,653.24
PARKS			
Salaries		$ 182,711.34	
Travelling Expenses		13,490.58	
Maintenance and Operating		8,557.63	204,759.55
RESEARCH			
Salaries	$ 776,685.32		
Travelling Expenses	39,913.22		
Maintenance and Operating	90,490.62	$ 907,089.16	
Grant — Ontario Research Foundation		$ 50,000.00	957,089.16
TIMBER			
Salaries	$ 745,549.59		
Travelling Expenses	46,467.67		
Maintenance and Operating	194,369.70	$ 986,386.96	
Grants — Municipalities and Conservation Authorities (see Statement No. 5)		80,309.46	1,066,696.42

FIELD SERVICES

BASIC ORGANIZATION — District Offices			
Salaries	$19,010,147.63		
Travelling Expenses	764,859.58		
Maintenance and Operating	5,881,799.40		
Equipment — Other than Forest Fire Suppression	2,675,990.41		
Maintenance of Forest Access Roads	617,884.38	$28,950,681.40	

Less — Federal Contributions:			
Federal-Provincial Forestry Agreement	$ 1,175,017.99		
Resources Development Agreement	90,467.18	1,265,485.17	27,685,196.23
EXTRA FIRE FIGHTING			
Wages, etc., Maintenance and Operating		$ 641,662.71	
Forest Fire Suppression Equipment		191,408.32	833,071.03
FOREST RANGER SCHOOL			
Salaries, Travelling Expenses, Maintenance and Operating		$ 263,457.81	
Less — Federal Contribution		117,920.65	145,537.16
JUNIOR RANGER PROGRAM			
Wages, Travelling Expenses, Maintenance and Operating			957,616.38
SUMMER RESORT ACCESS ROADS (CAPITAL)			
Construction Costs			53,031.57
LOGGING ROADS (CAPITAL)			
Construction Costs (see Receipts)		$ 347,996.51	
Less — Federal Contribution		105,166.21	242,830.30
FOREST ACCESS ROADS (CAPITAL)			
Construction Costs		$ 875,697.33	
Less — Federal Contribution		369,833.80	505,863.53
LAND ACQUISITION AND DEVELOPMENT			
Parks, Recreation Areas, Public Hunting and Fishing Areas, Construction of Buildings and Other Improvements			5,103,862.87
TOTAL DISBURSEMENTS			$42,212,898.28

Statement 2

TIMBER BRANCH - TIMBER SECTION

ANALYSIS OF CASH RECEIPTS BY DISTRICTS
For Year Ended March 31st, 1967

Districts	Crown Dues	Ground Rent	Forest Protection Charges	Interest Scalers' Wages Mill Licences, Etc.	Total Timber Revenue
Chapleau	$ 637,831.28	$ 1,558.00	$ 20,164.40	$ 554.46	$ 660,108.14
Cochrane	1,380,882.92	7,883.00	100,902.40	1,184.47	1,490,852.79
Fort Frances	303,203.95	979.00	13,284.64	183.47	317,651.06
Geraldton	1,682,725.04	14,575.00	186,560.00	249.25	1,884,109.29
Gogama	415,918.80	1,208.00	15,462.40	436.74	433,025.94
Kapuskasing	1,734,418.35	6,962.00	89,113.60	484.33	1,830,978.28
Kenora	977,227.23	10,773.00	137,894.40	310.19	1,126,204.82
Lindsay	43,805.74	173.00	2,214.40	1,227.13	47,420.27
North Bay	728,304.02	4,216.00	50,943.02	1,168.60	784,631.64
Parry Sound	283,380.52	1,444.00	18,427.94	500.94	303,753.40
Pembroke	738,861.26	3,532.00	45,195.60	254.14	787,843.00
Port Arthur	1,528,679.39	14,875.00	190,413.80	10,416.22	1,744,384.41
Sault Ste. Marie	839,549.96	6,017.00	76,247.84	19,219.77	941,034.57
Sioux Lookout	783,089.66	1,497.00	20,428.37	4,301.83	809,316.86
Sudbury	316,668.69	4,421.00	61,812.40	337.61	383,239.70
Swastika	457,328.68	1,948.00	25,748.40	298.70	485,323.78
Tweed	205,119.02	636.00	8,099.94	758.75	214,613.71
White River	192,690.32	3,253.00	43,256.16	63.00	239,262.48
Other Districts	23,409.45	—	17,670.74	2,677.53	43,757.72
	$13,273,094.28	$85,950.00	$1,123,840.45	$44,627.13	$14,527,511.86
Percentage of Total Timber Revenue	91.36	.60	7.74	.30	100.00%

Cash Deposits Received and Refunded	Total Timber Revenue and Cash Deposits	Percentage of Total Timber Revenue and Cash Deposits
$ —	$ 660,108.14	4.53
9,950.28	1,500,803.07	10.31
4,400.00	322,051.06	2.21
—	1,884,109.29	12.93
—	433,025.94	2.97
7,650.00 (Cr.)	1,823,328.28	12.52
6,200.00	1,132,404.82	7.77
11,100.00	58,520.27	.41
1,900.00 (Cr.)	782,731.64	5.37
17,000.00 (Cr.)	286,753.40	1.97
2,400.00 (Cr.)	785,443.00	5.39
2,867.06 (Cr.)	1,741,517.35	11.96
50.00	941,084.57	6.46
24,550.00	833,866.86	5.72
5,200.00	388,439.70	2.67
2,532.35	487,856.13	3.35
6,892.16	221,505.87	1.52
—	239,262.48	1.64
100.00 (Cr.)	43,657.72	.30
$38,957.73	$14,566,469.59	100.00%

Statement 3

FISH AND WILDLIFE REVENUE ANALYSIS OF CASH RECEIPTS For Year Ended March 31st, 1967

FISHERIES		
LICENCES		
Angling	$2,971,133.09	
Commercial Fishing	108,092.15	
Smelt	26,059.70	
Domestic	1,130.00	
Sale of Certain Fish	830.00	
	$3,107,244.94	
ROYALTY		
Commercial Fishing	723.93	$3,107,968.87
WILDLIFE		
LICENCES		
Non-Resident Hunting	$1,859,144.00	
Bear	4,066.25	
Deer	546,666.87	
Moose	436,508.35	
Ground Hog	39,442.98	
Gun	331,255.96	
Dog	25,934.08	
Trappers	31,641.00	
Fur Dealers	2,950.00	
Fur Farmers	4,694.35	
Pheasant	4,530.00	
Tanners	300.00	
Provincial Parks Hunting	27,764.15	
	$3,314,897.99	

Statement 3

FISH AND WILDLIFE REVENUE
ANALYSIS OF CASH RECEIPTS
For Year Ended March 31st, 1967 (Continued)

ROYALTY		
Game	223,867.40	3,538,765.39
GENERAL		
LICENCES AND PERMITS		
Guides	$ 1,350.00	
Wild Rice	7.00	
Hunt Camp	1,680.00	
Fines	60,658.18	
Sales — Confiscated Articles	26,264.38	
Miscellaneous	5,006.80	94,966.36
		$6,741,700.62

Statement No. 4

TOTAL EXPENDITURES ALLOCATED TO MAIN SERVICES RENDERED
For Year Ended March 31st, 1967

	Total	Fish and Wildlife	Forest Protection	Lands	Parks
ORDINARY EXPENDITURE					
Main Office	$ 2,310,044.88	$ 434,991.04	$ 409,476.97	$ 132,398.58	$ 431,158.24
Fish and Wildlife Branch	671,450.65	671,450.65	—	—	—
Forest Protection Branch	232,195.31	—	232,195.31	—	—
Lands and Surveys Branch	1,243,653.24	—	—	185,422.43	—
Parks Branch	204,759.55	—	—	—	204,759.55
Timber Branch	1,066,696.42	—	—	—	—
Research Branch	957,089.16	—	—	—	—
Forest Ranger School	263,457.81	70,079.78	21,050.28	—	—
Junior Ranger Program	957,616.38	5,254.27	279,854.13	18,788.75	375,963.33
Basic Organization (before deduction of Federal contributions of $1,383,405.82)	28,950,681.40	4,043,874.59	7,915,320.79	837,846.76	2,801,249.99
Extra Fire Fighting (Wages and Equipment)	833,071.03	—	833,071.03		
	$37,690,715.83	$5,225,650.33	$9,690,968.51	$1,174,456.52	$3,813,131.11
DISTRIBUTION OF GENERAL EXPENDITURE AND ADMINISTRATION COSTS OVER MAIN SERVICES					
Field Administration (Pro Rated)	—	$ 425,494.71	$ 692,720.04	$ 149,606.21	$ 704,715.20
— Percentage	—	12.77%	20.79%	4.49%	21.15%
Research (as per analysis)	—	1,095,604.54	77,401.08	152,348.21	10,568.96
Surveys (Pro Rated)	—	12,740.25	—	1,172,103.06	63,701.25
— Percentage	—	1%	—	92%	5%
	$37,690,715.83	$6,759,489.83	$10,461,089.63	$2,648,514.00	$4,592,116.52
LESS: FEDERAL CONTRIBUTIONS APPLIED AS CREDITS					
Forestry Agreement					
— Forest Inventory (as per costs)	$ 200,000.00	$ 40,000.00	$ 50,000.00	$ 30,000.00	—
— Planting	500,000.00	—	—	—	—
— Fire Fighting Equipment	475,017.99	—	475,017.99	—	—
Resources Development Agreement	90,467.18	90,467.18	—	—	—
Technical and Vocational Training Agreement	117,920.65	35,793.98	10,752.17	—	—
TOTAL ORDINARY EXPENDITURE	$36,307,310.01	$6,593,228.67	$9,925,319.47	$2,618,514.00	$4,592,116.52
CAPITAL DISBURSEMENTS					
Construction of Access Roads — S.R.	$ 53,031.57	$ —	$ —	$ 53,031.57	—
Construction of Logging Roads (after deduction of Federal contribution of $105,166.21) (Recovered — see receipts)	242,830.30	—	—	—	—
Construction of Forest Access Roads (after deduction of Federal contribution of $369,833.80)	505,863.53	—	—	—	—
Land Acquisition and Development	5,103,862.87	30,827.13	5,328.55	497,112.88	4,319,267.32
TOTAL DISBURSEMENTS	$42,212,898.28	$6,624,055.80	$9,930,648.02	$3,168,658.45	$8,911,383.84
Percentage of Total	—	15.69%	23.52%	7.51%	21.11%

*Deductions

Timber	Research	Surveys	Administration
$ 619,944.33	$ 143,463.62	$ 61,151.61	$ 77,460.49
—	—	—	—
—	—	—	—
—	—	1,058,230.81	—
—	—	—	—
1,066,696.42	—	—	—
—	957,089.16	—	—
139,738.02	—	32,589.73	—
274,938.00	—	—	2,817.90
9,480,291.19	603,294.37	17,095.33	3,251,708.38
—	—	—	—
$11,581,607.96	$1,703,847.15	$1,169,067.48	$3,331,986.77
$ 1,008,259.21	$ 246,233.82	$ 104,957.58	*$3,331,986.77
30.26%	7.39%	3.15%	—
614,158.18	1,950,080.97	—	—
25,480.50	—	*1,274,025.06	—
2%	—	—	—
$13,229,505.85	—	—	—
$ 80,000.00	—	—	—
500,000.00	—	—	—
—	—	—	—
—	—	—	—
71,374.50	—	—	—
$12,578,131.35	$ —	$ —	$ —
$ —	—	—	—
242,830.30	—	—	—
505,863.53	—	—	—
251,326.99	—	—	—
$13,578,152.17	$ —	$ —	$ —
32.17%	—	—	—

Statement 5

GRANTS TO MUNICIPALITIES AND CONSERVATION AUTHORITIES UNDER THE FORESTRY ACT R.S.O. 1960

(TO AID IN ACQUISITION OF FOREST AREAS)

For Year Ended March 31st, 1967

MUNICIPALITIES:		
COUNTIES		
Halton	$10,127.55	
Lanark	1,540.35	
Leeds and Grenville	4,151.52	
Middlesex	4,358.35	
Northumberland and Durham	9,022.73	
Ontario	11,281.83	
Prescott and Russell	1,519.81	
Renfrew	8,455.29	
Simcoe	22,029.79	$ 72,487.22
CONSERVATION AUTHORITIES:		
Ausable River	$ 1,001.65	
Big Creek Region	6,217.90	
Ganaraska Region	8,587.00	
Moira River	5,544.53	
Napanee Region	2,146.12	
North Grey Region	10,995.71	
Otonabee Region	854.77	
Otter Creek	1,339.38	
Sauble Valley	668.01	
Saugeen Valley	10,698.06	
South Nation River	414.37	48,467.50
		$120,954.72
Less — Federal Contribution ARDA Agreement		40,645.26
		$ 80,309.46

TIMBER BRANCH

OBJECTIVES

1. To provide through sound forest management practices the highest possible yields of the Crown forests consistent with the economic requirements of forest industry and the general welfare of the citizens of Ontario.
2. To encourage the expansion of forest industry to fully utilize the productive capacity of the forest.
3. To encourage sound forest management on privately owned woodlands.

ORGANIZATION

Timber Branch is divided into three Sections and their subordinate units with duties and responsibilities as follows.

REFORESTATION

Tree Production and Distribution: Production and treatment of genetically superior tree seed; establishment of seed production areas; and production and distribution of quality planting stock.

Agreement Forest Administration: Administration of management agreements and assistance and advice to municipalities.

Private Land Forestry: Forestry service for landowners.

SILVICULTURE

Forest Resources Inventory: Continuing program of aerial rephotography; field sampling; photo interpretation and map revision; compilation of inventory reports and maps for Crown Management Units; checking of Company Management Units inventory data; determination of productive areas on timber licences; preparation of contour plans; and Air Photo Library and map photo service.

Silvicultural Operations: Direction of the regeneration and stand improvement programs on Crown lands and on lands acquired for management under agreement.

TIMBER

Forest Management Planning: Supervision of management plans prepared by Department staff; preparation of planning manuals and volume tables; calculation of allowable cuts; and the construction of access roads on Crown lands.

Scaling: Measurement of timber cut; development of new methods of measurement; and licensing and registration of scalers.

Marketing and Forest Economics: Encouragement of industrial expansion; assistance to firms in plant location studies; analysis of economic implications of choices of action; mill licensing; publication of a directory and primary wood-using industries and of regional studies of timber availability; compilation of forestry statistics.

Sale of Timber: Issuance of timber licences; preparation of final returns for collection of stumpage charges; and compilation of cut statistics.

REFORESTATION SECTION

Tree Production and Distribution

TREE PRODUCTION

In the current fiscal year, sufficient seed was sown at the 10 forest tree nurseries for the production of 62,933,000 units of planting stock.

Table 1
NURSERY STOCK PRODUCTION TARGET BY NURSERIES

District	Nursery	Production Target
Kemptville	Kemptville	10,920,000
Kenora	Dryden	3,934,000
Lake Erie	St. Williams	4,966,000
Lake Simcoe	Midhurst	10,177,000
Lindsay	Orono	7,425,000
Port Arthur	Fort William	10,721,000
Swastika	Swastika	9,710,000
Chapleau	Chapleau	2,000,000
Gogama	Gogama	1,100,000
Sault Ste. Marie	Thessalon	1,980,000
Total		62,933,000

Table 2
NURSERY STOCK PRODUCTION TARGET BY SPECIES

Species	Number of Trees
White Pine	8,621,000
Red Pine	10,656,000
Jack Pine	8,959,000
Scotch Pine	2,570,000
White Spruce	19,582,000
Black Spruce	9,191,000
Other Species	3,354,000
Total	62,933,000

NURSERY STOCK CONTROL

The control and distribution of nursery stock involves the recording and maintenance of inventories at nurseries operated by the Department and available for disposition as provided in Section 7 of The Forestry Act and for use of Ontario. Over 6,000 applications and requisitions were processed resulting in the issue of over 5,000 orders to nurseries and the disposition of 51,712,461 trees during the year, an increase of 5.2 per cent over 1965-66.

Table 3
SUMMARY OF DISTRIBUTION OF NURSERY STOCK FOR PERIOD APRIL 1, 1966 TO MARCH 31, 1967

Purpose	Trees
Furnished in respect of private lands	9,542,325
Furnished for educational or scientific purposes	130,894
Furnished for use of Ontario	41,839,242
Miscellany	200,000
Total	51,712,461

Species	Planted on Private Land	Use of Ontario	E & S	Misc.
White Pine	1,079,100	7,173,425	—	—
Red Pine	2,628,500	3,881,756	—	—
Jack Pine	548,050	9,402,410	—	200,000
Scotch Pine	1,465,425	16,430	—	—
White Spruce	2,099,725	16,312,454	—	—
Black Spruce	169,175	4,485,134	—	—
Norway Spruce	309,300	33,349	—	—
Red Spruce	200	240,950	—	—
White Cedar	458,425	45,020	—	—
European Larch	99,175	2,439	—	—
Tamarack	30,950	36,700	—	—
White Ash	91,060	26,018	—	—
Silver Maple	162,785	30,356	—	—
Red Oak	83,850	572	—	—
Carolina Poplar	234,050	34,971	—	—
Black Locust	64,050	2,050	—	—
Others	18,505	115,208	—	—
Total	9,542,325	41,839,242	130,894	200,000

Table 4
NURSERY STOCK DISPOSITIONS
APRIL 1, 1957 TO MARCH 31, 1967

Year	Trees
1957-58	25,854,262
1958-59	33,414,110
1959-60	41,682,125
1960-61	49,833,412
1961-62	43,194,863
1962-63	43,767,916
1963-64	43,922,685
1964-65	49,484,068
1965-66	49,019,854
1966-67	51,712,461

Table 5
TREES FURNISHED IN RESPECT OF PRIVATE LAND
APRIL 1, 1966 TO MARCH 31, 1967

County or Territorial District	Tree Orders	Trees
Algoma	104	168,025
Brant	104	182,050
Bruce	101	85,925
Carleton	113	170,825
Cochrane	4	3,000
Dufferin	111	242,950
Dundas	44	51,300
Durham	134	368,450
Elgin	74	79,450
Essex	54	48,625
Frontenac	127	155,500
Glengarry	48	58,950
Grenville	82	176,350
Grey	143	251,825
Haldimand	36	36,225
Haliburton	40	64,000
Halton	105	186,600
Hastings	94	196,500
Huron	56	114,950
Kenora	25	98,700
Kent	48	40,425
Lambton	66	74,650
Lanark	105	150,925
Leeds	75	102,475
Lennox & Addington	52	52,925
Lincoln	38	30,150
Manitoulin	8	101,600
Middlesex	151	245,350
Muskoka	94	138,300
Nipissing	41	125,800
Norfolk	153	169,525
Northumberland	91	114,550
Ontario	172	341,850
Oxford	97	289,550
Parry Sound	92	302,350
Peel	161	461,425
Perth	34	14,750
Peterboro	70	184,800
Prescott	30	366,700
Prince Edward	41	25,900
Rainy River	25	166,350
Renfrew	124	318,225
Russell	28	92,650
Simcoe	250	665,375
Stormont	21	39,700
Sudbury	48	156,475
Thunder Bay	106	521,150
Timiskaming	10	9,350
Victoria	59	47,375
Waterloo	81	191,350
Welland	111	214,250
Wellington	129	256,175
Wentworth	145	207,175
York	313	582,525
Total	4,668	9,542,325

Table 6
TREES FURNISHED IN THE PERIOD
APRIL 1, 1966 TO MARCH 31, 1967

District	For Private Land Trees	For Use of Ontario* Trees
Chapleau	—	3,687,495
Cochrane	3,000	2,458,600
Fort Frances	166,350	901,700
Geraldton	—	3,795,060
Gogama	—	3,672,225
Kapuskasing	—	3,368,785
Kemptville	1,195,900	1,756,756
Kenora	98,700	1,318,325
Lake Erie	938,650	432,073
Lake Huron	1,780,350	928,010
Lake Simcoe	2,308,100	444,762
Lindsay	779,175	1,130,182
North Bay	2,000	1,619,570
Parry Sound	440,650	803,864
Pembroke	444,025	1,305,940
Port Arthur	521,150	2,444,282
Sault Ste. Marie	168,025	3,562,625
Sioux Lookout	—	741,850
Sudbury	258,075	2,627,415
Swastika	7,350	3,073,116
Tweed	430,825	1,377,775
White River	—	304,000
Unclassified	—	84,832
Total	9,542,325	41,839,242

*Includes nursery stock furnished to Department of Highways, for laboratory tests, etc.

NURSERY SOIL MANAGEMENT

The objective is to maintain the balance of main nutrients in the soil for production of top quality seedlings for planting in Ontario. For this purpose, 398 soil samples and 378 plant samples, consisting of approximately 15,000 seedlings, were analyzed for a chemical composition of soil and plant.

The analysis data are used for an evaluation of soil and plant condition as well as in the preparation of soil amendments for production of high quality stock.

Various herbicides and soil fumigants are being tested and successfully used in reduction of disease, control of weeds, increase of seed germination and seedling growth.

Studies are carried out in optimum fertilizer levels, the relationship of fertilizer and stock density to growth and the use of irrigation water.

Nursery diseases, seedling nutrition and nursery soil fertility studies are undertaken on a co-operative basis with the Department of Forestry and Rural Development.

SEED COLLECTION

The inventory of forest tree seed in storage at the Ontario Tree Seed Plant at Angus, as of June 1, 1966, was about 1,693,000,000 viable seeds of 46 species, weighing 339,765 ounces or more than 10.5 tons and valued at approximately $240,000.00.

The 1966 crop year was a good one for the pines but a poor one for the spruces.

Table 7
1966 SEED CROP YEAR — COLLECTED

Species	Number of Bushels
White Pine	5,006
Red Pine	3,930
Jack Pine	5,700
Scotch Pine	68
White Spruce	2
Black Spruce	296
Other Species	1,246
Total	16,248

TREE IMPROVEMENT

The tree improvement program, concerned with increasing the quality and quantity of seed available, was continued through the selection of additional "plus trees", the development of seed production areas and the planting of grafted trees in seed orchards. During the year, 8,140 scions were collected from "plus" trees for grafting at four co-operating nurseries. In addition, 1,000 scions from white pine trees showing resistance to blister rust were grafted. A total of 10.1 acres of seed production area were thinned, released or otherwise improved for seed production purposes. Some 2,863 grafted trees for seed orchards were planted on 21.8 acres. Provenance tests in jack pine were established on 20 acres in six Districts in co-operation with the Department of Forestry and Rural Development.

Table 8
ESTABLISHED SEED PRODUCTION AREAS AND SEED ORCHARDS AS OF MARCH 31, 1967

	Number	Acres
Seed Production Areas	21	224.8
Seed Orchards	12	64.3

Agreement Forest Administration

Section 2 of The Forestry Act authorizes the Minister to enter into agreement with the owners of lands that are suitable for forestry purposes for the management of such lands, and to make grants to any conservation authority or to any municipality to encourage and assist it in the acquisition of lands that are to be managed under such an agreement.

A total of $120,954.72 in grants to assist with the acquisition of lands was paid during the year. Canada contributed to Ontario $40,645.26 of the foregoing amount under agreement made between Canada and Ontario pursuant to their respective Agricultural Rehabilitation and Development Acts.

Table 9
AGREEMENTS UNDER SECTION 2 OF THE FORESTRY ACT AS OF MARCH 31, 1967

AGREEMENT WITH	Date of Agreement	NUMBER OF ACRES Added during year	Totals
Government of Canada:			
National Capital Commission	Aug. 16, 1961	—	3,632.00
Conservation Authorities:			
Ausable River	Dec. 13, 1951	50.00	4,299.00
Big Creek Region	Dec. 2, 1954	247.00	3,494.90
Catfish Creek	Dec. 19, 1962	—	501.00
Central Lake Ontario	Sept. 24, 1963	—	195.00
Crowe Valley	Aug. 21, 1963	—	200.00
Ganaraska Region	Jan. 31, 1947	300.00	8,448.60
Grand River	Mar. 18, 1952	—	5,766.37
Hamilton Region	Oct. 19, 1962	—	12.50
Lakehead Region	May 15, 1958	—	1,256.70
Lower Thames Valley	Aug. 12, 1964	—	300.00
Maitland Valley	Apr. 1, 1955	—	949.00
Metropolitan Toronto and Region	Apr. 11, 1951	—	1,928.00
Moira River	Nov. 28, 1951	955.00	15,570.00
Napanee Valley	Oct. 28, 1954	521.00	6,666.00
Niagara Peninsula	June 6, 1963	—	186.00
North Grey Region	June 25, 1958	686.00	7,055.00
Otonabee Region	May 15, 1963	130.00	1,345.00
Otter Creek	Apr. 26, 1957	35.00	1,532.00
Sauble Valley	Sept. 29, 1959	60.00	2,758.00
Saugeen Valley	Dec. 15, 1952	514.00	12,472.00
South Nation River	Mar. 28, 1960	68.00	1,098.50
Sydenham Valley	July 13, 1965	—	150.00
Upper Thames River	Apr. 11, 1951	—	3,364.36
Counties:			
Brant	Nov. 15, 1952	—	50.00
Bruce	Jan. 20, 1950	—	15,533.35
Carleton	July 30, 1964	—	680.00
Dufferin	Nov. 26, 1930	—	2,305.00
Grey	Dec. 21, 1937	—	8,378.08
Halton	Mar. 14, 1950	200.00	1,498.63
Huron	Nov. 27, 1950	—	1,439.00

Table 9
AGREEMENTS UNDER SECTION 2 OF THE FORESTRY ACT AS OF MARCH 31, 1967 (Continued)

AGREEMENT WITH	Date of Agreement	NUMBER OF ACRES Added during year	Totals
Kent	Dec. 23, 1953	—	75.39
Lanark	July 5, 1940	200.00	3,635.00
Leeds and Grenville	Apr. 24, 1940	700.00	8,300.50
Lennox and Addington	Apr. 3, 1952	—	1,186.00
Middlesex	Mar. 8, 1954	146.00	1,335.50
Northumberland and Durham	June 10, 1924	842.00	5,719.00
Ontario	July 9, 1930	582.00	3,321.00
Oxford	Sept. 1, 1950	—	716.56
Prescott and Russell	Mar. 15, 1937	324.00	23,892.03
Renfrew	Dec. 26, 1951	1,380.00	8,458.00
Simcoe	June 19, 1925	781.00	20,293.74
Stormont, Dundas and Glengarry	Sept. 20, 1949	—	2,048.45
Victoria	Aug. 10, 1928	—	8,319.00
Waterloo	Apr. 17, 1950	—	710.48
Wellington	June 18, 1964	—	1,100.00
Wentworth	Nov. 27, 1952	—	889.30
York	Mar. 27, 1924	—	4,130.70
Townships:			
Bonfield	Apr. 1, 1952	—	60.00
Charlottenburgh	Apr. 1, 1955	—	175.00
Cramahe	Jan. 4, 1964	—	162.00
Cumberland	May 29, 1952	—	808.44
Darlington	Aug. 19, 1964	—	140.00
Galway and Cavendish	Nov. 1, 1952	—	619.00
Machar	Dec. 30, 1963	—	90.00
Marlborough	Nov. 21, 1953	—	200.00
Mosa	July 16, 1964	—	144.00
Torbolton	Mar. 28, 1953	—	430.80
Williamsburg	Oct. 19, 1962	—	400.00
Summary:			
1 Government of Canada		—	3,632.00
23 Conservation Authorities		3,566.00	79,547.93
24 Counties		5,155.00	124,014.71
11 Townships		—	3,229.24
59 Totals		8,721.00	210,423.88

TREES CONSERVATION

Under authority of The Trees Act, and with the approval of the Minister of Lands and Forests, counties or municipalities in territorial districts may pass by-laws to restrict and regulate the destruction of trees by cutting, burning or other means.

Such by-laws have been passed by the following to permit the cutting of important species to certain diameter limits, and indicates the concern felt by those municipalities for the management of privately owned woodlands.

Counties:

Brant, Bruce, Dufferin, Elgin, Grey, Haldimand, Halton, Hastings, Huron, Lambton, Leeds & Grenville, Lincoln, Middlesex, Norfolk, Northumberland & Durham, Oxford, Peel, Perth, Renfrew, Waterloo, Welland, Wellington, Wentworth.

Township: Brunel.

Private Land Forestry

This Act authorizes the Minister to enter into forestry agreements with private landowners to reforest idle land and to rehabilitate existing woodlands. The field assistance service under The Woodlands Improvement Act is provided free to landowners who qualify under the Act.

Under Regulations OC-2854/66 of The Woodlands Improvement Act 1966, 33 management areas were designated in southern Ontario. Ten were scheduled to receive benefits under the program effective January 1, 1967. Management Areas designated included single counties or a combination of one or more counties.

Management planning for the designated Management Areas began immediately. Forestry work programs were prepared for 164 new Woodlands Improvement Act agreements in the Management Areas scheduled to receive the assistance in 1967. In all districts, forestry advice and service were provided to individual forest owners and organizations to improve forestry on private lands.

Table 10

SUMMARY OF THE FORESTRY ADVISORY AND ASSISTANCE SERVICES PROVIDED TO PRIVATE LANDOWNERS AND ORGANIZATIONS — 1966-1967

A. Number of inquiries received		9,000	
B. Number of field inspections made		2,703	
(a) for reforestation purposes	1,208		
(b) for woodland management purposes	855		
(c) for miscellaneous purposes e.g. insects, shade trees, Christmas tree culture	640		
C. Number of Management programs prepared for privately owned management areas		544	
(a) advisory service programs	373		
(b) Woodlands Improvement Act programs	181		
D. Total acreage of private forest land for which management programs were prepared		27,141	acres
(a) acreage contained in advisory programs	18,273		
(b) acreage under Woodlands Improvement Act programs	8,868		
E. Total acreage of forest land treated during the year under The Woodlands Improvement Act		250	acres
(a) reforestation of idle land	211		
(b) woodlands improved	39		
F. Total volume of timber marked under the advisory service program			
(a) saw timber	4,749		MFBM
(b) pulpwood	821		cords
(c) other round timber	719,972		cu. ft.
G. Number of forestry youth clubs serviced		63	
(a) 4-H Forestry clubs	27		
(b) 4-H Conservation clubs	2		
(c) other Clubs, etc.	34		
H. Hours spent on forestry instruction			
(a) University of Guelph	26		
(b) Kemptville Agricultural School	45		
(c) Western Ontario Agricultural School	6		

Additional Contributions to Private Land Forestry:

1. Leadership training of farm boys and girls, involving one week of forestry instruction to approximately 60 selected young people from all of Ontario.
2. Conducted tours at St. Williams, Orono, Midhurst and Kemptville Forest Tree Nurseries and the Ontario Forest Seed Plant at Angus. Approximately 6,500 school children were given such tours. Conducted field tours, field days and meetings held by the districts totalled 245.
3. Co-operated in preparing and manning exhibits at the Toronto C.N.E., the Ottawa C.C.E.A., the London Fair, the Royal Winter Fair, and the International Ploughing Match.
4. Continued the direction of Ontario's Centennial Tree Planting Program with the school children. Participating in the program were 41,806 students from 1,610 classes representing 792 schools, who in total planted 404,825 trees on 380 separate projects.
5. Co-operated in producing the public relations film "Forests for the Future", and an instructional film on nursery practice entitled "Seeds to Trees".
6. Conducted mail survey of Christmas tree growers in Ontario. Published report entitled: "Some aspects of the Christmas Tree Industry in Ontario".
7. Co-operated with the Ontario Department of Agriculture in Province-wide meetings culminating in the formation of Regional groups and the Ontario Maple Syrup Producers' Association.

SILVICULTURE SECTION

Forest Resources Inventory

During the year under review, air photography was completed on 22,412 square miles in northwestern Ontario and 2,830 square miles in southern Ontario.

Inventory field work was carried out on 7,683 square miles in the Sault Ste. Marie, Fort Frances and Kenora Districts.

Forest stand maps and tabulated inventory data, such as area classification, detailed stand description, volume and area summaries by age-classes, were completed on 13,201 square miles.

The multiplex plotting machine was used to determine contour and form lines on three Provincial Parks covering an area of 11,470 acres.

The photo processing unit produced 115,809 contact prints, 2,518 mosaics, 2,573 enlargements, 419 diapositives, 710 copy negatives, and 1,395 cronaflex reproductions.

The following table shows the gross value of production from the photo processing unit in recent years:

Table 11

Year	Cash Receipts	Value of Department Work	Total
1961-62	$47,429.92	$19,967.59	$67,397.51
1962-63	47,154.13	21,792.09	68,946.22
1963-64	59,907.06	30,350.22	90,257.28
1964-65	69,386.13	19,802.26	89,188.39
1965-66	50,755.68	24,592.23	75,347.91
1966-67	56,754.20	31,296.58	88,050.78

Silvicultural Operations

Table 12

SUMMARY OF SILVICULTURAL OPERATIONS ON CROWN LANDS AND AGREEMENT FORESTS FOR FORESTRY PURPOSES IN 1966-1967

Regeneration Program	
Planted:	
Nursery Trees	55,010 acres
Tubed Seedlings	16,909 acres
Direct-Seeded	8,923 acres
Natural Regeneration Treatments	20,296 acres
Sub-Total	101,138 acres
Tending Program	
Various Treatments	51,954 acres
Total	153,092 acres

ARTIFICIAL REGENERATION

The following table gives the number of trees planted by species:

Table 13

	CROWN		AGREEMENT FORESTS
	Nursery Trees	Tubed Seedlings	Nursery Trees
White pine ..... Pinus strobus L.	5,934,675	199,135	967,450
Red pine ..... Pinus resinosa Ait.	2,813,225	4,938,702	861,150
Jack pine ..... Pinus banksiana Lamb.	9,400,105	2,040,258	316,500
White spruce ..... Picea glauca (Moench) Voss	16,569,810	5,007,403	776,025
Black spruce ..... Picea mariana (Mill) B.S.P.	5,193,157	4,770,878	—
Other species	251,078	—	194,225
Totals	40,162,050	16,956,376	3,115,350

The planting program, divided into the two major categories — Crown Lands and Agreement Forests — is shown below:

Table 14

Crown Lands

	Nursery Trees	Acres	Tubed Seedlings	Acres
1. Unalienated	18,048,833	22,745	4,324,094	3,671
2. Licenced	22,113,217	28,265	12,632,282	13,238
Totals	40,162,050	51,010	16,956,376	16,909
Agreement Forests	3,115,350	4,000	—	—

Table 15

TREES PLANTED BY DISTRICTS

District	Nursery Trees	Tubed Seedlings
Chapleau	3,621,800	980,400
Cochrane	2,456,875	741,500
Fort Frances	1,087,350	425,150
Geraldton	4,737,125	1,375,414
Gogama	3,696,225	1,240,800
Kapuskasing	4,674,117	1,754,800
Kemptville	252,450	10,400
Kenora	1,298,100	712,900
Lake Erie	354,300	—
Lake Huron	16,760	—
Lake Simcoe	40,325	—
Lindsay	899,100	—
North Bay	1,614,000	984,500
Parry Sound	754,731	906,134
Pembroke	1,097,000	559,200
Port Arthur	2,246,500	1,329,245
Sault Ste. Marie	3,150,750	484,235
Sioux Lookout	738,300	643,975
Sudbury	2,611,780	1,797,422
Swastika	3,371,850	1,421,200
Tweed	1,138,612	69,800
White River	304,000	1,519,301
Totals	40,162,050	16,956,376

Table 16

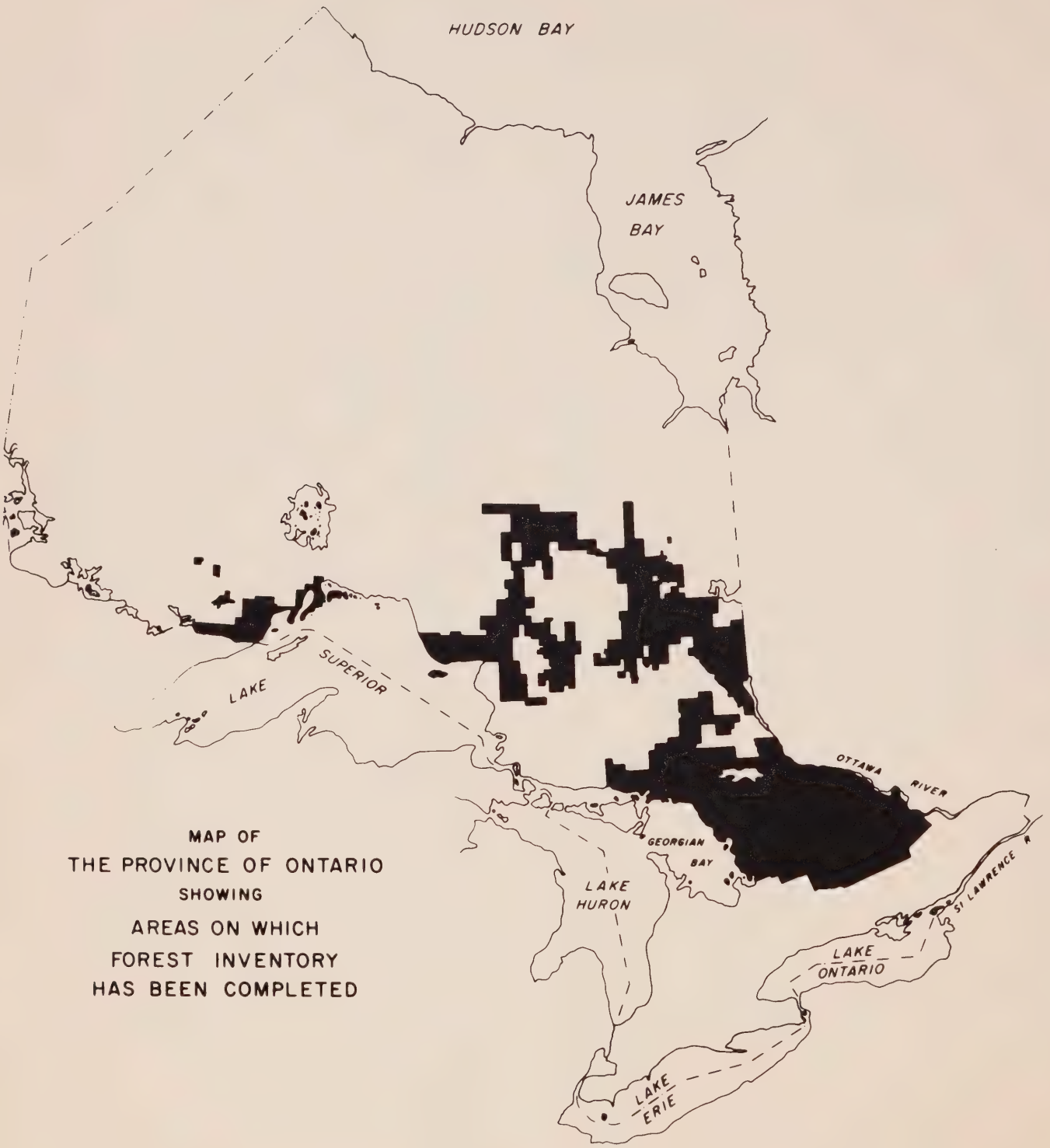
TREES PLANTED ON AGREEMENT FORESTS

Government of Canada		
National Capital Commission	219,550	219,550
Conservation Authorities		
Ausable	168,925	
Big Creek	11,000	
Ganaraska	28,000	
Grand	60,300	
Lower Thames	7,025	
Maitland	13,000	
Metro Region	22,200	
Moira	60,100	
North Grey Region	57,525	
Otter Creek	28,000	
Ottonabee	30,000	
Sauble	36,900	
Saugeen	70,250	
South Nation	421,225	
Upper Thames	72,450	1,086,900
Counties		
Bruce	67,000	
Dufferin	3,000	
Grey	99,450	
Halton	35,100	
Huron	5,800	
Lanark	78,000	
Leeds and Grenville	537,700	
Middlesex	7,825	
Northumberland	18,000	
Oxford	3,050	
Ontario	29,250	
Prescott and Russell	228,450	
Renfrew	388,400	
Simcoe	241,675	
Stormont - Dundas - Glengarry	14,000	
Waterloo	26,200	
Wellington	5,000	
Wentworth	6,500	
York	5,000	1,799,400
Townships		
Mosa	5,000	
Crame	4,500	9,500
Total — Agreement Forests		3,115,350

Table 17

DIRECT SEEDING

District	Aerial (Acres)	Ground (Acres)	Total (Acres)
Kenora	1,380	—	1,380
Sioux Lookout	160	55	215
Port Arthur	—	50	50
Geraldton	—	440	440
Chapleau	1,589	116	1,705
Gogama	—	1,080	1,080
Sudbury	800	—	800
Swastika	1,598	—	1,598
North Bay	75	1,165	1,240
White River	415	—	415
Totals	6,017	2,906	8,923



MAP OF
THE PROVINCE OF ONTARIO
SHOWING
AREAS ON WHICH
FOREST INVENTORY
HAS BEEN COMPLETED

Table 18
STAND IMPROVEMENT TREATMENTS* — CROWN LANDS

District	SITE PREPARATION			CUTTING METHODS FOR REGENERATION			FOREST TENDING									
	For Natural Regeneration	For Artificial Regeneration	Sub-total	Modified Harvest Cutting	Seed-Tree Marking	Sub-total	Hand Cleaning	Herbicide Spraying	Thinning and Improvement Cutting	Girdling, Frilling and Poisoning	Marking for Improvement	Pruning	Deer Habitat Improvement	Harvest Cutting	Sub-total	Total
Chapleau	1,199	3,416	4,615	—	—	—	270	—	100	—	—	—	—	—	370	4,985
Cochrane	303	2,282	2,585	—	—	—	65	—	—	—	—	—	—	—	65	2,650
Fort Frances	109	714	823	—	—	—	—	—	—	—	—	—	—	—	—	823
Geraldton	895	2,174	3,069	—	—	—	772	—	10	3	—	—	—	—	785	3,854
Gogama	20	3,035	3,055	—	—	—	—	2,000	—	—	—	—	—	—	2,000	5,055
Kapuskasing	—	2,404	2,404	10	—	10	432	5,979	72	—	—	—	—	—	6,483	8,897
Kemptville	58	—	58	—	—	—	—	—	—	29	—	—	—	—	29	87
Kenora	2,506	2,212	4,718	—	—	—	18	—	—	—	—	—	—	—	18	4,736
Lake Erie	—	570	570	26	—	26	—	—	—	—	24	17	—	—	41	637
Lake Huron	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lake Simcoe	—	—	—	—	—	—	—	—	27	—	—	—	—	—	27	27
Lindsay	1,162	—	1,162	—	—	—	—	—	—	—	—	1,613	—	—	1,613	2,775
North Bay	2,279	2,345	4,624	440	1,496	1,936	651	1,000	—	—	—	—	50	—	1,701	8,261
Parry Sound	882	1,555	2,437	374	—	374	90	210	70	—	2,800	—	17,712	—	20,882	23,693
Pembroke	250	1,033	1,283	—	—	—	264	110	172	30	—	252	3,250	—	4,078	5,361
Port Arthur	615	2,846	3,461	41	—	41	32	—	45	—	—	—	—	—	77	3,579
Sault Ste. Marie	3,059	1,256	4,315	—	300	300	676	500	162	1,054	63	25	120	—	2,600	7,215
Sioux Lookout	3,618	1,264	4,882	—	20	20	131	—	—	—	—	—	—	—	131	5,033
Sudbury	—	585	585	—	—	—	281	—	—	25	—	—	—	—	306	891
Swastika	—	4,214	4,214	—	—	—	669	536	70	—	—	—	—	—	1,275	5,489
Tweed	—	—	—	592	—	592	130	175	160	224	1,925	—	—	—	2,614	3,206
White River	42	3,252	3,294	—	—	—	—	2,110	—	—	—	—	—	—	2,110	5,404
Sub-totals	16,997	35,157	52,154	1,483	1,816	3,299	4,481	12,620	888	1,365	4,812	1,907	21,132	—	47,205	102,658
STAND IMPROVEMENT TREATMENTS* — AGREEMENT FORESTS																
Kemptville	—	1,001	1,001	—	—	—	586	232	72	34	232	214	—	58	1,428	2,429
Lake Erie	—	—	—	—	—	—	110	—	—	80	120	50	—	80	440	440
Lake Huron	—	45	45	—	—	—	118	—	81	386	5	169	—	40	799	844
Lake Simcoe	—	155	155	—	—	—	52	—	586	126	85	418	—	—	1,267	1,422
Lindsay	—	26	26	—	—	—	193	—	142	48	80	283	—	59	805	831
Tweed	—	—	—	—	—	—	—	—	10	—	—	—	—	—	10	10
Sub-totals	—	1,227	1,227	—	—	—	1,059	232	891	674	522	1,134	—	237	4,749	5,976
Totals	16,997	36,384	53,381	1,483	1,816	3,299	5,540	12,852	1,779	2,039	5,334	3,041	21,132	237	51,954	108,634

*Includes site preparation and other silvicultural treatment excluding artificial regeneration.

STAND IMPROVEMENT

Stand improvement encompasses both the treating of forest stands to achieve maximum quality and quantity, and special harvesting techniques to aid natural regeneration.

During the fiscal year 1966-1967, 102,658 acres of Crown lands and 5,976 acres of Agreement Forests received treatment to improve the quality and quantity of the final crop.

SPECIAL PROJECTS

Prison Camps: About 17,000 man-days of labour were provided to this Department by the inmates of the forestry camps operated by the Department of Reform Institutions. The total area covered in this program was 1,300 acres. Beaver Creek Correctional Camp, near Gravenhurst, operated by the Collins Bay Penitentiary, also supplied about 900 man-days of inmate labour.

Junior Rangers: Timber work, including tree planting, stand improvement, cone collection and nursery work, occupied 15,000 man-days. The total area covered in this program was 5,400 acres.

TIMBER SECTION

Forest Management Planning

The development of forest areas is based on management plans that provide detailed information about the volume of annual cut, cutting methods, regeneration treatments, road and camp locations, and other facts essential to orderly management. The plans are based on such considerations as the arrangement of species and age-classes on productive forest lands, the proximity to existing road networks, division of the forest into compartments, and the age of maturity of the main groups of species.

Standard management plans are based on inventory data gathered using photo interpretation, point sampling, and computer compilation methods. The information is entered in stand ledgers, which also serve as a record of changes. Standard plans have been prepared following the re-inventory of Crown management units started in 1958. The essentials of this type of planning are contained in the Manual of Management Plan Requirements.

The initial management plans, based on the inventory method used prior to 1958, are retained until replaced with standard plans, and form the basis for the management of a large proportion of the Crown management units in the Province.

Management plans form a framework into which 10-year operating plans are fitted. An operating plan shows in detail the stands to be cut, regenerated, and tended, the roads to be built, and other improvements to be made to carry out operations on the management units.

The status of management plans is as follows:

Table 19

1. **Crown Management Units:** The plans for these units are prepared by Department staff. There are 78 Crown management units covering 90,665.0 square miles with 70 management plans:

9	standard management plans in force	5,001.5 sq. mi.
13	plans being processed for approval	13,463.2 sq. mi.
48	initial management plans in force	67,043.5 sq. mi.
7	management units not under plans	5,001.8 sq. mi.
1	unit operating under approved operating plan	155.0 sq. mi.

2. **Company Management Units:** The management plans for Company management units are prepared by licensees. There are 66 Company units with 99,342.9 square miles under licence to 45 companies. The status of management planning for these units is as follows:

43	approved management plans	64,199.5 sq. mi.
9	plans being processed for approval	4,530.9 sq. mi.
12	plans not yet due	25,730.7 sq. mi.
2	units inactive	4,881.8 sq. mi.

The explanation for the 12 plans not yet due is that because of changes in area, etc., 12 licensees have been required to prepare new management plans.

3. **Agreement Forest Units:** The management plans for these units are prepared by Department staff. There are 60 units covering approximately 329 square miles. The status of management planning for the Agreement Forest units is as follows:

6	approved standard plans	46,336 acres
20	being processed for approval	58,962 acres
16	plans in the process of preparation	49,696 acres
18	interim or annual plans in force and land acquired since inventory	55,430 acres
	Total — 329 square miles, or	210,424 acres

Scaling

In an effort to adjust the Department's scaling methods to the fast changing techniques of cutting and moving wood from stump to mill, extensive trials were conducted with the new concepts of wood measurement, designed to speed up and simplify scaling operations while retaining control over movement of wood.

The most promising wood measuring methods in this respect to date are: tree length scaling, weight scaling, and sample scaling. In addition, some preliminary work was done in connection with the development of a simple log grading technique for hardwoods and pine, where an estimate of quality for timber cut and scaled is of a particular value to all concerned.

The need for speeding up scaling and returning of scaled wood has been recognized by the Department for some time. This has become more apparent in view of rapidly changing bush operations, resulting in much faster movement of wood. In recognition of these changes and in an effort to improve efficiency of scaling, an operational trial was conducted in one District with the adaptation of scaling to the computer programming systems. Since the results from this full scale operation were quite satisfactory, further trials, on a larger scale, will be conducted next fiscal year.

Scaling examinations were held during the past year at the following locations on the dates noted: Ontario Forest Technical School, Dorset, April 7, 1966; Huntsville, May 20, 1966; and Sault Ste. Marie, Sept. 23, 1966.

A total of 253 licences were issued, a lower figure than previous years due to the fact that a 1965 change in regulations provided for renewal on a three-year basis.

Marketing and Forest Economics

Ontario's forest industries occupy an extremely important position in relation to the total economy of the Province. According to 1964 D.B.S. information, this industry group accounts directly for 66,000 jobs, pays $317 million in salaries and wages, ships goods worth nearly $1.3 billion and has a value added in manufacturing of more than $621 million. This represents 9.2% of the total number of employees in the Province, 8.7% of the total salaries and wages paid, 8.1% of the value of all goods shipped, and 8.3% of the total value added by manufacture. It also represents a contribution of about $120 to the Gross Provincial Product for each 100 cubic feet of wood used.

Forest industry expansions which have already taken place put Ontario in a good position to take advantage of the expected increases in world demand for forest products in the early 1970's. However, softness in the world pulp markets due to excess capacity and cut-backs in house construction resulted in no appreciable gains for 1966.

Large scale forest industry development projects usually require two or three years lead time and, in spite of short term market difficulties, there has been considerable interest in new pulp industries and further expansions of existing facilities in Ontario.

Licencing of Mills: The number of mills licenced under the Crown Timber Act in 1966 totalled 944 as compared to 964 in the previous year. Sawmills continued their long term downward trend, with the greatest change occurring in mills of low capacity.

Table 20

Sawmills:	
Daily lumber capacity over 50 M f.b.m.	25
Daily lumber capacity 10 to 50 M f.b.m.	113
Daily lumber capacity under 10 M f.b.m.	655
Miscellaneous sawn products	97
Veneer Mills	28
Pulp Mills	26

Sale of Timber

The volume and value of wood cut from Crown lands during 1965-1966 was almost identical with the year previous. However, there was an increase in the consumption of wood chips produced as a by-product of sawmilling operations of 44,617 cords. This brings the cord equivalent of chips produced by sawmills to more than 438,000 cords in 1966, or enough wood to supply the full requirements of a large sized pulp mill. Pulpwood and boltwood purchased from patented lands was down by nearly 150,000 cords during 1966.

Table 21

SUMMARY OF VOLUME AND VALUE OF WOOD CUT FROM CROWN LANDS, BY SPECIES, 1965-1966

Species	Volume (Cu. Ft.)	Stumpage Value $
SOFTWOODS		
Balsam	10,044,176.08	$ 215,312.88
Cedar	170,285.11	6,254.95
Hemlock	2,694,189.96	73,888.44
Pine, jack	99,390,204.80	2,681,100.69
Pine, red	6,767,486.71	409,768.95
Pine, white	24,702,465.85	1,341,957.44
Spruce	197,935,135.72	7,382,677.14
Tamarack	73,490.37	1,437.96
Christmas Trees	19,730.00	2,030.50
Fuelwood	398,610.90	2,927.50
Total	342,195,775.50	$12,117,356.45
HARDWOODS		
Ash	143,425.86	3,468.84
Basswood	464,952.52	27,603.12
Beech	479,719.88	9,094.08
Birch, white	3,203,371.13	50,532.41
Birch, yellow	8,284,385.20	652,689.36
Butternut	1,177.20	55.63
Cherry	25,293.16	984.01
Elm	383,859.03	10,311.30
Maple	8,322,577.66	323,670.67
Oak	386,549.49	16,242.57
Poplar	21,205,280.52	198,034.68
Fuelwood	744,367.95	6,275.01
Total	43,644,959.60	1,298,961.68
Grand Total	385,840,735.10	$13,416,318.13

NOTE: The value of export levy ($29,378.57) is not included in above.

Table 22
CROWN TIMBER SALES, 1966-1967

New Licences issued under section 2 C.T.A.	68.4	square miles
New Licences issued under section 3 C.T.A.	7,088.1	square miles
New Licences issued under section 5 C.T.A.	nil	square miles
Total	7,156.5	square miles

Abandonments: In the fiscal year 1966-67, licensed areas in the amount of 3,710.8 square miles were abandoned.

Table 23
SUMMARY OF AREA UNDER CROWN TIMBER LICENCE AS OF MARCH 31, 1967

	AREA IN SQUARE MILES			
Year	Licences under Section 2 C.T.A.	Licences under Section 3 C.T.A.	Licences under Section 5 C.T.A.	Total Area
1962-63	3,102.1	97,830.8	152.4	101,085.3
1963-64	2,556.9	99,679.5	18.2	102,254.6
1964-65	2,565.0	103,347.5	4.9	105,917.4
1965-66	2,466.7	100,362.8	1.2	102,830.7
1966-67	2,006.5	104,269.9	nil	106,276.4

FORESTRY STUDY UNIT

Under its Director, J. A. Brodie, the Forestry Study Unit, established September 1, 1964, continued its investigation of forestry problems in Ontario. Mr. Brodie has been associated with the Department of Lands and Forests since 1923 and was Chief of the Timber Branch from 1956 to 1964. The hearings have been completed and the report is being written.

Table 24
SUMMARY OF VOLUME AND VALUE OF WOOD CUT FROM AGREEMENT FORESTS

	1966-67		1965-66		1964-65		1963-64	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Pulpwood (cords)	10,015.34	$ 64,045.26	9,512.05	$ 72,050.10	13,389.46	$ 69,035.29	14,188.18	$ 51,229.63
Sawlogs (cu. ft.)	130,447.27	17,082.60	111,837.45	17,758.84	113,137.87	23,837.43	87,259.53	13,796.66
Poles, Posts, Piling (cu. ft.)	85,815.31	33,344.66	74,280.45	30,381.33	120,342.38	23,202.09	53,880.97	23,850.92
Fuelwood (cords)	1,889.63	10,119.01	730.39	3,666.17	4,126.91	17,277.29	1,124.44	8,710.77
Christmas Trees (No.)	—	—	—	—	340	515.54	11,260.00	8,747.37
Miscellaneous	—	5,635.98	—	7,375.60	—	7,525.30	—	3,579.37
Total All Products	1,228,215.03*	$130,227.51	1,056,725.30*	$131,232.04	1,722,371.70*	$141,392.94	1,442,713.20*	$109,914.73

*Equivalent Cu. Ft.

Table 25

SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1st, 1965 to MARCH 31st, 1966

SPECIES	Pieces	Cords	Feet	Equivalent in cu. ft.	Dues $	Bonus $	Stumpage Value $
BOARD FOOT MEASURE							
ONTARIO SCALE							
Ash	6,240	—	319,792	59,774.21	$ 1,595.16	$ 1,035.81	$ 2,630.97
Balsam	15,616	—	405,922	75,873.27	1,616.74	1,528.13	3,144.87
Basswood	41,698	—	2,366,678	442,369.72	11,833.55	15,582.20	27,415.75
Beech	30,939	—	1,699,616	317,685.23	2,549.45	5,022.26	7,571.71
Birch, white	101,073	—	4,658,044	870,662.43	7,032.80	19,881.32	26,914.12
Birch, yellow	560,215	—	44,208,191	8,263,213.27	221,037.94	431,310.05	652,347.99
Butternut	120	—	6,298	1,177.20	9.45	46.18	55.63
Cedar	13,864	—	396,489	74,110.09	1,189.50	1,127.64	2,317.14
Cherry	2,173	—	134,227	25,089.16	671.22	308.49	979.71
Elm	11,852	—	1,139,280	212,949.53	5,696.63	2,947.41	8,644.04
Hemlock	173,909	—	12,943,629	2,419,369.91	38,830.91	22,752.82	61,583.73
Maple	517,130	—	40,016,212	7,479,665.80	200,070.75	114,647.48	314,718.23
Oak	30,804	—	1,659,519	310,190.47	8,291.12	7,309.95	15,601.07
Pine, jack	1,180,740	—	33,998,648	6,354,887.48	135,839.31	30,754.79	166,594.10
Pine, red	393,938	—	27,291,433	5,101,202.43	136,513.51	126,737.95	263,251.46
Pine, white	1,313,538	—	123,797,120	23,139,648.60	620,233.58	626,882.61	1,247,116.19
Poplar	157,444	—	7,502,563	1,402,348.22	11,240.09	13,408.29	24,648.38
Spruce	598,799	—	19,953,903	3,729,701.50	79,815.64	65,069.16	144,884.80
Tamarack	452	—	12,744	2,382.06	38.24	46.02	84.26
Total Ontario Scale	5,150,544	—	322,510,308	60,282,300.58	$ 1,484,105.59	$1,486,398.56	$ 2,970,504.15
CUBIC FOOT MEASURE							
SAWLOGS							
Balsam	128,508	—	733,803.49	733,803.49	$ 12,101.87	$ 5,046.59	$ 17,148.46
Birch, white	15,241	—	96,930.89	96,930.89	605.42	1,311.40	1,916.82
Cedar	232	—	2,152.63	2,152.63	38.18	34.34	72.52
Hemlock	4	—	82.74	82.74	3.56	2.49	6.05
Pine, jack	4,885,518	—	27,430,725.07	27,430,725.07	643,028.18	175,698.98	818,727.16
Pine, red	113,462	—	782,688.15	782,688.15	25,825.68	25,859.14	51,684.82
Pine, white	130,561	—	1,420,448.84	1,420,448.84	46,881.63	43,130.94	90,012.57
Poplar	108,078	—	1,232,553.20	1,232,553.20	7,389.12	5,000.69	12,389.81
Spruce	4,411,127	—	23,403,618.46	23,403,618.46	771,919.39	128,014.21	899,933.60
Tamarack	667	—	3,327.76	3,327.76	54.90	80.42	135.32
Total Sawlogs (cubic)	9,793,398	—	55,106,331.23	55,106,331.23	$ 1,507,847.93	$ 384,179.20	$ 1,892,027.13
TREE LENGTH MATERIAL							
Balsam	36,182	—	244,167.05	244,167.05	$ 4,934.81	$ 2,831.40	$ 7,766.21
Pine, jack	426,590	—	4,880,003.47	4,880,003.47	111,526.54	24,394.88	135,921.42
Poplar	2,150	—	35,783.30	35,783.30	210.49	—	210.49
Spruce	770,986	—	6,334,328.89	6,334,328.89	182,099.52	50,285.00	232,384.52
Total Tree Length Material	1,235,908	—	11,494,282.71	11,494,282.71	$ 298,771.36	$ 77,511.28	$ 376,282.64
BOOM TIMBER, PILING, POLES							
BOOM AND DIMENSION TIMBER							
Balsam	6	—	43.14	43.14	$ 1.15	$ .09	$ 1.24
Birch, white	52	—	675.57	675.57	26.35	6.76	33.11
Cedar	137	—	1,548.51	1,548.51	59.07	25.75	84.82
Hemlock	9,985	—	197,465.55	197,465.55	9,932.35	986.06	10,918.41
Pine, jack	17,609	—	257,173.33	257,173.33	10,830.20	2,507.67	13.337.87
Pine, red	1,167	—	28,680.97	28,680.97	1,439.26	536.21	1,975.47
Pine, white	228	—	8,430.28	8,430.28	480.14	220.63	700.77
Spruce	5,222	—	116,104.20	116,104.20	5,430.69	695.71	6,126.40
Tamarack	75	—	560.00	560.00	16.80	—	16.80
PILING							
Pine, jack	2,143	—	44,785.75	44,785.75	2,004.68	407.84	2,412.52
Pine, white	9	—	194.46	194.46	9.78	3.90	13.68
Spruce	1,671	—	43,645.27	43,645.27	1,845.98	359.49	2,205.47
POLES							
Balsam	92	—	359.68	359.68	11.73	9.30	21.03

Birch, white	55	—	740.39	740.39	29.21	7.40	36.61
Birch, yellow	6	—	175.23	175.23	9.42	1.10	10.52
Cedar	1,232	—	9,041.43	9,041.43	320.82	212.20	533.02
Hemlock	89	—	1,225.66	1,225.66	52.02	22.94	74.96
Maple	3	—	50.16	50.16	2.13	.87	3.00
Oak	1	—	11.17	11.17	.31	.45	.76
Pine, jack	52,497	—	774,123.44	774,123.44	32,709.00	22,861.97	55,570.97
Pine, red	34,595	—	775,936.56	775,936.56	38,580.45	50,548.73	89,129.18
Pine, white	604	—	13,509.47	13,509.47	702.54	162.09	864.63
Spruce	34,460	—	132,967.15	132,967.15	6,200.69	3,520.14	9,720.83
Total Boom Timber, Piling, Poles	161,938	—	2,407,447.37	2,407,447.37	$ 110,694.77	$ 83,097.30	$ 193,792.07
Total Cubic Foot Measure	11,191,244	—	69,008,061.31	69,008,061.31	$ 1,917,314.06	$ 544,787.78	$ 2,462,101.84
CORDAGE							
PULPWOOD							
Ash	—	982.33	—	83,498.05	$ 491.22	$ 333.85	$ 825.07
Balsam	—	105,762.53	—	8,989,815.05	148,067.53	39,158.75	187,226.28
Basswood	—	265.68	—	22,582.80	132.84	54.53	187.37
Beech	—	1,906.29	—	162,034.65	953.15	569.22	1,522.37
Birch, white	—	20,428.41	—	1,736,414.85	10,214.32	6,196.42	16,410.74
Birch, yellow	—	247.02	—	20,996.70	123.54	207.31	330.85
Cedar	—	456.13	—	38,771.05	638.58	16.15	654.73
Cherry	—	2.40	—	204.00	1.20	3.10	4.30
Elm	—	2,010.70	—	170,909.50	1,005.34	661.92	1,667.26
Hemlock	—	894.66	—	76,046.10	1,252.53	52.76	1,305.29
Maple	—	7,201.92	—	612,163.20	3,793.51	3,120.35	6,913.86
Oak	—	898.21	—	76,347.85	449.13	191.61	640.74
Pine, jack	—	700,191.44	—	59,516,272.40	1,389,534.55	95,413.92	1,484,948.47
Pine, jack (export levy)	—	(28,583.61)	—	(2,429,606.85)	—	14,291.86	14,291.86
Pine, red	—	890.12	—	75,660.20	1,246.05	2,318.36	3,564.41
Pine, white	—	1,414.25	—	120,211.25	1,979.93	1,268.52	3,248.45
Poplar	—	171,705.95	—	14,595,005.75	85,853.14	35,377.62	121,230.76
Poplar (export levy)	—	(9,829.00)	—	(835,465.00)	—	982.90	982.90
Spruce	—	1,930,175.20	—	164,064,892.00	5,391,078.76	692,206.70	6,083,285.46
Spruce (export levy)	—	(13,872.15)	—	(1,179,132.75)	—	13,872.15	13,872.15
Tamarack	—	787.14	—	66,906.90	1,097.05	95.12	1,192.17
Tamarack (export levy)	—	(16.55)	—	(1,406.75)	—	1.66	1.66
Total Pulpwood	—	2,946,220.38	—	250,428,732.30	$ 7,037,912.37	$ 906,394.78	$ 7,944,307.15
FUELWOOD							
Hardwood	—	8,757.27	—	744,367.95	$ 4,378.66	$ 1,896.35	$ 6,275.01
Softwood	—	4,689.54	—	398,610.90	2,344.82	582.68	2,927.50
Total Fuelwood	—	13,446.81	—	1,142,978.85	$ 6,723.48	$ 2,479.03	$ 9,202.51
BOLTS							
Balsam	—	.12	—	10.20	$ .17	$ .01	$ .18
Birch, white	—	5,858.20	—	497,947.00	2,930.48	2,290.53	5,221.01
Pine, jack	—	2.19	—	186.15	4.38	.22	4.60
Pine, red	—	.81	—	68.85	1.13	—	1.13
Poplar	—	46,327.53	—	3,937,840.05	23,182.17	16,353.07	39,535.24
Poplar (export levy)	—	(2,300.00)	—	(195,500.00)	—	230.00	230.00
Spruce	—	667.87	—	56,768.95	1,870.04	233.35	2,103.79
Total Bolts	—	52,856.72	—	4,492,821.20	$ 27,988.37	$ 19,107.58	$ 47,095.95
Total Cordage	—	3,012,523.91	—	256,064,532.35	$ 7,072,624.22	$ 927,981.39	$ 8,000,605.61

Table 25

SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1st, 1965 to MARCH 31st, 1966 (Continued)

SPECIES	Pieces	Cords	Feet	Equivalent in cu. ft.	Dues $	Bonus $	Stumpage Value $
MISCELLANEOUS							
POSTS — lin. ft.							
Ash	48	—	768	153.60	$ 7.68	$ 5.12	$ 12.80
Balsam	55	—	521	104.20	4.61	—	4.61
Cedar	27,356	—	222,287	44,457.40	2,222.87	365.05	2,587.92
Spruce	215	—	2,610	522.00	26.10	1.44	27.54
MINING TIMBER — cu. ft.							
Cedar	55	—	204.00	204.00	3.36	1.44	4.80
Pine, jack	36,793	—	131,589.56	131,589.56	3,096.17	476.09	3,572.26
Pine, red	25,996	—	3,249.55	3,249.55	53.52	108.96	162.48
Pine, white	184	—	22.95	22.95	.38	.77	1.15
Poplar	1,000	—	1,750.00	1,750.00	20.00	—	20.00
Spruce	25,440	—	52,587.30	52,587.30	1,727.64	277.09	2,004.73
Tamarack	175	—	313.65	313.65	5.17	4.24	9.41
TIE BLOCKS — cu. ft.							
Pine, jack	65	—	458.15	458.15	10.78	.54	11.32
POKER POLES — cords							
Hardwood	—	2,714.10	—	230,698.50	1,357.06	678.52	2,035.58
CHRISTMAS TREES	39,460	—	19,730.00	19,730.00	1,986.00	44.50	2,030.50
Total Miscellaneous	156,842	2,714.10	—	485,840.86	$ 10,521.34	$ 1,963.76	$ 12,485.10
Total Ontario Scale	5,150,544	—	322,510,308	60,282,300.58	1,484,105.59	1,486,398.56	2,970,504.15
Total Cubic Foot Measure	11,191,244	—	69,008,061.31	69,008,061.31	1,917,314.06	544,787.78	2,462,101.84
Total Cordage	—	3,012,523.91	—	256,064,532.35	7,072,624.22	927,981.39	8,000,605.61
GRAND TOTAL	16,498,630	3,015,238.01	—	385,840,735.10	$10,484,565.21	$2,961,131.49	$13,445,696.70
							760,402.54

Number of permits issued and included in above — 3,330
Conversion factor: 1 cubic foot = 5.35 board feet
1 cord = 85 cubic feet

Table 26

SUMMARY OF VOLUME AND VALUE OF TIMBER CUT DURING PERIOD APRIL 1st, 1965 to MARCH 31st, 1966

CHAPLEAU

SPECIES	Pieces	Cords	Feet	Equivalent in cu. ft.	Dues $	Bonus $	Stumpage Value $
BOARD FOOT MEASURE							
ONTARIO SCALE							
Pine, red	211	—	22,071	4,125.42	$ 110.37	$ 66.97	$ 177.34
Pine, white	28,929	—	2,552,062	477,020.93	12,760.32	5,468.22	18,228.54
Total Ontario Scale	29,140	—	2,574,133	481,146.35	$ 12,870.69	$ 5,535.19	$ 18,405.88
CUBIC FOOT MEASURE							
SAWLOGS							
Balsam	13,683	—	67,713.85	67,713.85	$ 1,117.21	$ 231.22	$ 1,348.43
Pine, jack	1,750,962	—	8,815,821.09	8,815,821.09	207,201.90	30,245.03	237,446.93
Pine, red	321	—	3,081.19	3,081.19	101.68	52.38	154.06
Pine, white	365	—	7,965.11	7,965.11	262.83	157.20	420.03
Spruce	486,122	—	2,722,743.30	2,722,743.30	89,844.97	8,080.12	97,925.09
Total Sawlogs (Cubic)	2,251,453	—	11,617,324.54	11,617,324.54	$ 298,528.59	$ 38,765.95	$ 337,294.54
BOOM TIMBER, PILING, POLES							
BOOM AND DIMENSION TIMBER							
Pine, red	59	—	1,363.01	1,363.01	$ 68.41	$ 13.63	$ 82.04
POLES							
Pine, jack	58	—	1,265.48	1,265.48	59.07	12.65	71.72
Total Boom Timber, Piling, Poles	117	—	2,628.49	2,628.49	$ 127.48	$ 26.28	$ 153.76
Total Cubic Foot Measure	2,251,570	—	11,619,953.03	11,619,953.03	$ 298,656.07	$ 38,792.23	$ 337,448.30
CORDAGE							
PULPWOOD							
Balsam	—	311.19	—	26,451.15	$ 435.66	$ 26.83	$ 462.49
Birch, white	—	457.98	—	38,928.30	228.99	—	228.99
Pine, jack	—	72,633.44	—	6,173,842.40	145,266.88	2,765.10	148,031.98
Pine, white	—	0.10	—	8.50	0.14	—	0.14
Poplar	—	17,059.70	—	1,450,074.50	8,529.85	—	8,529.85
Spruce	—	36,406.99	—	3,094,594.15	101,939.57	2,405.96	104,345.53
Total Pulpwood	—	126,869.40	—	10,783,899.00	$ 256,401.09	$ 5,197.89	$ 261,598.98
FUELWOOD							
Hardwood	—	160.00	—	13,600.00	$ 80.00	$ 80.00	$ 160.00
Softwood	—	168.00	—	14,280.00	84.00	84.00	168.00
Total Fuelwood	—	328.00	—	27,880.00	$ 164.00	$ 164.00	$ 328.00
Total Cordage	—	127,197.40	—	10,811,779.00	$ 256,565.09	$ 5,361.89	$ 261,926.98
Total Ontario Scale	29,140	—	2,574,133	481,146.35	12,870.69	5,535.19	18,405.88
Total Cubic Feet	2,251,570	—	11,619,953.03	11,619,953.03	298,656.07	38,792.23	337,448.30
GRAND TOTAL	2,280,710	127,197.40	—	22,912,878.38	$ 568,091.85	$ 49,689.31	$ 617,781.16
							$3,345.96

Number of permits issued and included in above — 62
Conversion factor: 1 cubic foot = 5.35 board feet
1 cord = 85 cubic feet

Table 26 (Continued)

COCHRANE

SPECIES	Pieces	Cords	Feet	Equivalent in cu. ft.	Dues $	Bonus $	Stumpage Value $
BOARD FOOT MEASURE							
ONTARIO SCALE							
Birch, white	2,277	—	109,064	20,385.79	$ 163.60	$ 28.90	$ 192.50
Pine, jack	137,880	—	2,912,724	544,434.39	11,480.22	10.79	11,491.01
Pine, white	5,902	—	643,416	120,264.67	3,217.08	3,081.29	6,298.37
Poplar	8,589	—	469,084	87,679.25	703.63	143.05	846.68
Spruce	95,598	—	1,932,758	361,263.18	7,731.03	5,798.42	13,529.45
Total Ontario Scale	250,246	—	6,067,046	1,134,027.28	$ 23,295.56	$ 9,062.45	$ 32,358.01
CUBIC FOOT MEASURE							
SAWLOGS							
Birch, white	2,686	—	11,381.95	11,381.95	$ 68.27	$ 67.25	$ 135.52
Pine, jack	369,107	—	1,638,873.38	1,638,873.38	38,535.55	9,767.14	48,302.69
Poplar	1,633	—	13,511.47	13,511.47	81.07	81.07	162.14
Spruce	74,808	—	352,026.54	352,026.54	11,627.20	2,073.88	13,701.08
Total Sawlogs	448,234	—	2,015,793.34	2,015,793.34	$ 50,312.09	$ 11,989.34	$ 62,301.43
TREE LENGTHS							
Balsam	550	—	3,059.15	3,059.15	$ 55.37	$ 1.98	$ 57.35
Pine, jack	61,279	—	800,304.50	800,304.50	18,807.16	13,205.02	32,012.18
Spruce	162,717	—	1,186,803.90	1,186,803.90	39,156.41	8,153.36	47,309.77
Total Tree Lengths	224,546	—	1,990,167.55	1,990,167.55	$ 58,018.94	$ 21,360.36	$ 79,379.30
BOOM TIMBER, PILING, POLES							
BOOM AND DIMENSION TIMBER							
Birch, white	52	—	675.57	675.57	$ 26.35	$ 6.76	$ 33.11
Pine, jack	174	—	2,615.74	2,615.74	76.88	10.96	87.84
Spruce	264	—	12,095.41	12,095.41	399.62	22.48	422.10
PILING							
Spruce	250	—	4,998.17	4,998.17	248.85	49.99	298.84
POLES							
Spruce	38	—	546.72	546.72	23.23	5.47	28.70
Total Boom Timber, Piling, Poles	778	—	20,931.61	20,931.61	$ 774.93	$ 95.66	$ 870.59
Total Cubic Foot Measure	673,558	—	4,026,892.50	4,026,892.50	$ 109,105.96	$ 33,445.36	$ 142,551.32
CORDAGE							
PULPWOOD							
Balsam	—	19,076.68	—	1,621,517.80	$ 26,707.34	$ 4,680.60	$ 31,387.94
Birch, white	—	12.50	—	1,062.50	6.25	1.25	7.50
Pine, jack	—	36,156.36	—	3,073,290.60	62,312.72	4,185.47	66,498.19
Poplar	—	8,116.43	—	689,896.55	4,058.23	2,472.51	6,530.74
Spruce	—	331,186.23	—	28,150,829.55	927,321.43	118,569.44	1,045,890.87
Total Pulpwood	—	394,548.20	—	33,536,597.00	$ 1,020,405.97	$ 129,909.27	$ 1,150,315.24
FUELWOOD							
Hardwood	—	957.50	—	81,387.50	$ 478.75	$ 10.50	$ 489.25
Softwood	—	24.00	—	2,040.00	12.00	—	12.00
Total Fuelwood	—	981.50	—	83,427.50	$ 490.75	$ 10.50	$ 501.25
BOLTS							
Balsam	—	.12	—	10.20	$ .17	$ .01	$ .18
Birch, white	—	3,063.48	—	260,395.80	1,531.74	890.15	2,421.89
Pine, jack	—	2.19	—	186.15	4.38	.22	4.60
Pine, red	—	.81	—	68.85	1.13	—	1.13
Poplar	—	17,123.75	—	1,455,518.75	8,561.94	5,113.88	13,675.82
Spruce	—	667.87	—	56,768.95	1,870.04	233.75	2,103.79
Total Bolts	—	20,858.22	—	1,772,948.70	$ 11,969.40	$ 6,238.01	$ 18,207.41
Total Cordage	—	416,387.92	—	35,392,973.20	$ 1,032,866.12	$ 136,157.78	$ 1,169,023.90

MISCELLANEOUS							
POSTS — lin. ft.							
Cedar	1,049	—	8,674	1,734.80	$ 86.74	$ —	$ 86.74
Total Miscellaneous	1,049	—	8,674	1,734.80	$ 86.74	$ —	$ 86.74
Total Ontario Scale	250,246	—	6,067,046	1,134,027.28	23,295.56	9,062.45	32,358.01
Total Cubic Foot Measure.	673,558	—	4,026,892.50	4,026,892.50	109,105.96	33,445.36	142,551.32
Total Cordage	—	416,387.92	—	35,392,973.20	1,032,866.12	136,157.78	1,169,023.90
GRAND TOTAL	924,853	416,387.92	—	40,555,627.78	$ 1,165,354.38	$ 178,665.59	$ 1,344,019.97
Number of permits issued and included in above — 363							$50,807.37

Conversion factor: 1 cubic foot = 5.35 board feet
1 cord = 85 cubic feet

FORT FRANCES

BOARD FOOT MEASURE							
ONTARIO SCALE							
Balsam	2,022	—	90,405	16,898.13	$ 361.62	$ .40	$ 362.02
Birch, white	13	—	129	24.11	.19	—	.19
Cedar	1,287	—	41,242	7,708.79	123.73	17.22	140.95
Pine, jack	260,840	—	9,103,420	1,701,573.83	36,413.68	5.40	36,419.08
Pine, red	369	—	38,395	7,176.64	191.99	148.80	340.79
Pine, white	233	—	14,605	2,729.91	73.04	50.81	123.85
Poplar	363	—	15,501	2,897.38	23.25	—	23.25
Spruce	139,145	—	3,728,290	696,876.64	14,913.16	5,594.50	20,507.66
Tamarack	45	—	733	137.01	2.20	—	2.20
Total Ontario Scale	404,317	—	13,032,720	2,436,022.44	$ 52,102.86	$ 5,817.13	$ 57,919.99
CUBIC FOOT MEASURE							
SAW-LOGS							
Balsam	54	—	150.66	150.66	$ 2.49	$ 2.03	$ 4.52
Cedar	76	—	553.11	553.11	9.13	18.83	27.96
Pine, jack	80,988	—	352,857.67	352,857.67	8,292.15	2,589.37	10,881.52
Pine, red	1,190	—	10,188.59	10,188.59	336.22	519.66	855.88
Pine, white	826	—	7,590.78	7,590.78	250.50	370.30	620.80
Poplar	441	—	5,360.96	5,360.96	32.17	15.53	47.70
Spruce	3,822	—	18,445.91	18,445.91	608.71	229.77	838.48
Tamarack	24	—	187.51	187.51	3.09	6.29	9.38
Total Sawlogs (cubic)	87,421	—	395,335.19	395,335.19	$ 9,534.46	$ 3,751.78	$ 13,286.24
BOOM TIMBER, PILING, POLES BOOM AND DIMENSION TIMBER							
Pine, jack	100	—	2,139.87	2,139.87	$ 99.72	$ 21.41	$ 121.13
Pine, red	19	—	488.99	488.99	25.59	9.78	35.37
Spruce	48	—	1,422.16	1,422.16	79.27	14.22	93.49
Total Boom Timber, Piling, Poles	167	—	4,051.02	4,051.02	$ 204.58	$ 45.41	$ 249.99
Total Cubic Foot Measure	87,588	—	399,386.21	399,386.21	$ 9,739.04	$ 3,797.19	$ 13,536.23
CORDAGE							
PULPWOOD							
Balsam	—	2,039.27	—	173,337.95	$ 2,854.99	$ 542.35	$ 3,397.34
Birch, white	—	349.50	—	29,707.50	174.75	35.11	209.86
Pine, jack	—	35,229.76	—	2,994,529.60	70,459.52	7,741.60	78,201.12
Pine, jack (Export levy)	—	(28,583.61)	—	(2,429,606.85)	—	14,291.86	14,291.86
Poplar	—	15,415.70	—	1,310,334.50	7,707.89	4,122.25	11,830.14
Spruce	—	44,745.75	—	3,803,388.75	125,288.11	20,454.66	145,742.77
Total Pulpwood	—	97,779.98	—	8,311,298.30	$ 206,485.26	$ 47,187.83	$ 253,673.09

Table 26 (Continued)

SPECIES	Pieces	Cords	Feet	Equivalent in cu. ft.	Dues $	Bonus $	Stumpage Value $
FUELWOOD							
Hardwood	—	115.04	—	9,778.40	$ 57.52	$ 40.87	$ 98.39
Softwood	—	243.63	—	20,708.55	121.84	76.51	198.35
Total Fuelwood	—	358.67	—	30,486.95	$ 179.36	$ 117.38	$ 296.74
Total Cordage	—	98,138.65	—	8,341,785.25	$ 206,664.62	$ 47,305.21	$ 253,969.83
MISCELLANEOUS							
POSTS — lin. ft.							
Cedar	1,793	—	12,569	2,513.80	$ 125.69	$ 2.92	$ 128.61
CHRISTMAS TREES	38,035	—	19,017.50	19,017.50	1,901.75	—	1,901.75
MINING TIMBER — cu. ft.							
Cedar	55	—	204.00	204.00	3.36	1.44	4.80
Total Miscellaneous	39,883	—	—	21,735.30	$ 2,030.80	$ 4.36	$ 2,035.16
Total Ontario Scale	404,317	—	13,032,720	2,436,022.44	52,102.86	5,817.13	57,919.99
Total Cubic Foot Measure	87,588	—	399,386.21	399,386.21	9,739.04	3,797.19	13,536.23
Total Cordage	—	98,138.65	—	8,341,785.25	206,664.62	47,305.21	253,969.83
GRAND TOTAL	531,788	98,138.65	—	11,198,929.20	$ 270,537.32	$ 56,923.89	$ 327,461.21
							$27,441.37

Number of permits issued and included in above — 190
Conversion factor:.1 cubic foot = 5.35 board feet
1 cord = 85 cubic feet

Table 26 (Continued)

GERALDTON

SPECIES	Pieces	Cords	Feet	Equivalent in cu. ft.	Dues $	Bonus $	Stumpage Value $
CUBIC FOOT MEASURE							
SAW-LOGS							
Balsam	3	—	25.56	25.56	$ .42	$ .09	$ .51
Pine, jack	52,012	—	461,988.22	461,988.22	9,235.07	462.76	9,697.83
Spruce	180,415	—	1,622,490.18	1,622,490.18	53,446.83	1,662.12	55,108.95
Total Saw-logs (cubic)	232,430	—	2,084,503.96	2,084,503.96	$ 62,682.32	$ 2,124.97	$ 64,807.29
TREE LENGTH MATERIAL							
Balsam	4	—	93.32	93.32	$ 1.53	$ .33	$ 1.86
Pine, jack	39	—	1,170.29	1,170,29	27.54	1.38	28.92
Spruce	6,974	—	142,853.74	142,853.74	4,705.76	146.04	4,851.80
Total Tree Length Material	7,017	—	144,117.35	144,117.35	$ 4,734.83	$ 147.75	$ 4,882.58
BOOM TIMBER, PILING, POLES							
BOOM AND DIMENSION TIMBER							
Balsam	5	—	24.70	24.70	$ .41	$ .09	$ .50
Cedar	16	—	91.98	91.98	2.89	3.76	6.65
Pine, jack	358	—	2,917.68	2,917.68	68.66	3.43	72.09
Spruce	1,721	—	28,886.64	28,886.64	950.67	61.81	1,012.48
PILING							
Pine, jack	3	—	65.07	65.07	1.54	.08	1.62
Spruce	224	—	6,063.35	6,063.35	199.72	19.71	219.43
POLES							
Cedar	52	—	680.90	680.90	26.94	—	26.94
Pine, jack	2,204	—	45,337.23	45,337.23	1,066.74	53.33	1,120.07
Total Boom Timber, Piling, Poles	4,583	—	84,067.55	84,067.55	$ 2,317.57	$ 142.21	$ 2,459.78
Total Cubic Foot Measure	244,030	—	2,312,688.86	2,312,688.86	$ 69,734.72	$ 2,414.93	$ 72,149.65
CORDAGE							
PULPWOOD							
Balsam	—	23,608.71	—	2,006,740.35	$ 33,052.19	$ 6,980.25	$ 40,032.44
Birch, white	—	2,072.74	—	176,182.90	1,036.38	40.62	1,077.00
Pine, jack	—	161,212.00	—	13,703,020.00	321,680.53	16,248.20	337,928.73
Poplar	—	49,718.74	—	4,226,092.90	24,859.38	24.76	24,884.14
Spruce	—	391,361.74	—	33,265,747.90	1,095,574.09	106,833.15	1,202,407.24
Tamarack	—	5.49	—	466.65	7.69	—	7.69
Total Pulpwood	—	627,979.42	—	53,378,250.70	$ 1,476,210.26	$ 130,126.98	$ 1,606,337.24
FUELWOOD							
Softwood	—	875.00	—	74,375.00	$ 437.50	$ 2.50	$ 440.00
Total Fuelwood	—	875.00	—	74,375.00	$ 437.50	$ 2.50	$ 440.00
BOLTS							
Birch, white	—	54.94	—	4,669.90	$ 27.48	$ 13.75	$ 41.23
Poplar	—	10,874.35	—	924,319.75	5,437.20	2,302.06	7,739.26
Total Bolts	—	10,929.29	—	928,989.65	$ 5,464.68	$ 2,315.81	$ 7,780.49
Total Cordage	—	639,783.71	—	54,381,615.35	$ 1,482,112.44	$ 132,445.29	$ 1,614,557.73
MISCELLANEOUS							
POSTS — lin. ft.							
Cedar	216	—	1,815	363.00	$ 18.15	$ 11.66	$ 29.81
Spruce	64	—	576	115.20	5.76	1.44	7.20
MINING TIMBER — cu. ft.							
Pine, jack	474	—	3,216.54	3,216.54	75.70	3.79	79.49
Spruce	557	—	3,529.77	3,529.77	116.28	10.38	126.66
CHRISTMAS TREES	1,165	—	582.50	582.50	58.25	20.50	78.75
Total Miscellaneous	2,476	—	—	7,807.01	$ 274.14	$ 47.77	$ 321.91
Total Cubic Foot Measure	244,030	—	2,312,688.86	2,312,688.86	69,734.72	2,414.93	72,149.65

Total Cordage							
GRAND TOTAL	246,506	639,783.71	—	56,702,111.22	$ 1,552,121.30	$ 134,907.99	$ 1,687,029.29

Number of permits issued and included in above — 103
Conversion factor: 1 cubic foot = 5.35 board feet
1 cord = 85 cubic feet

$716.22

GOGAMA

BOARD FOOT MEASURE							
ONTARIO SCALE							
Birch, yellow	7,394	—	472,318	88,283.74	$ 2,361.59	$ 2,361.59	$ 4,723.18
Pine, jack	206,589	—	8,377,504	1,565,888.60	33,510.01	85.37	33,595.38
Pine, red	9,258	—	1,024,571	191,508.60	5,122.87	4,273.39	9,396.26
Pine, white	99,835	—	12,956,608	2,421,795.89	64,783.08	61,131.12	125,914.20
Spruce	128,074	—	3,929,190	734,428.04	15,716.77	11,787.57	27,504.34
Total Ontario Scale	451,150	—	26,760,191	5,001,904.87	$ 121,494.32	$ 79,639.04	$ 201,133.36
CUBIC FOOT MEASURE							
SAWLOGS							
Balsam	12	—	37.16	37.16	$ .61	$ .17	$ .78
Birch, white	5,807	—	28,407.37	28,407.37	194.72	122.96	317.68
Pine, jack	249,834	—	1,267,333.67	1,267,333.67	29,782.34	5,646.97	35,429.31
Pine, red	230	—	4,349.65	4,349.65	143.54	108.74	252.28
Pine, white	5,937	—	107,557.13	107,557.13	3,549.39	2,688.93	6,238.32
Poplar	3,169	—	25,121.99	25,121.99	150.73	72.08	222.81
Spruce	77,670	—	503,502.58	503,502.58	16,615.57	1,606.89	18,222.46
Total Sawlogs	342,659	—	1,936,309.55	1,936,309.55	$ 50,436.90	$ 10,246.74	$ 60,683.64
BOOM TIMBER, PILING, POLES							
POLES							
Birch, white	55	—	740.39	740.39	$ 29.21	$ 7.40	$ 36.61
Pine, jack	957	—	19,678.70	19,678.70	941.61	196.79	1,138.40
Pine, red	1,320	—	39,411.37	39,411.37	2,159.36	394.11	2,553.47
Spruce	624	—	19,022.28	19,022.28	1,047.39	8.47	1,055.86
Total Boom Timber, Piling, Poles	2,956	—	78,852.74	78,852.74	$ 4,177.57	$ 606.77	$ 4,784.34
Total Cubic Foot Measure	345,615	—	2,015,162.29	2,015,162.29	$ 54,614.47	$ 10,853.51	$ 65,467.98
CORDAGE							
PULPWOOD							
Balsam	—	59.79	—	5,082.15	$ 83.71	$ —	$ 83.71
Pine, jack	—	9,226.35	—	784,239.75	18,452.70	52.73	18,505.43
Spruce	—	41,724.79	—	3,546,607.15	116,829.40	5,902.93	122,732.33
Total Pulpwood	—	51,010.93	—	4,335,929.05	$ 135,365.81	$ 5,955.66	$ 141,321.47

Table 26 (Continued)

SPECIES	Pieces	Cords	Feet	Equivalent in cu. ft.	Dues $	Bonus $	Stumpage Value $
FUELWOOD							
Hardwood	—	65.00	—	5,525.00	$ 32.50	$ —	$ 32.50
Softwood	—	72.50	—	6,162.50	36.25	36.25	72.50
Total Fuelwood	—	137.50	—	11,687.50	$ 68.75	$ 36.25	$ 105.00
BOLTS							
Birch, white	—	131.16	—	11,148.60	$ 65.59	$ 65.59	$ 131.18
Poplar	—	622.89	—	52,945.65	311.45	311.45	622.90
Total Bolts	—	754.05	—	64,094.25	$ 377.04	$ 377.04	$ 754.08
Total Cordage	—	51,902.48	—	4,411,710.80	$ 135,811.60	$ 6,368.95	$ 142,180.55
MISCELLANEOUS							
MINING TIMBER — cu. ft.							
Pine, jack	35,413	—	121,944.12	121,944.12	$ 2,869.28	$ 430.39	$ 3,299.67
Spruce	6,081	—	17,954.31	17,954.31	591.44	73.93	665.37
Total Miscellaneous	41,494	—	139,898.43	139,898.43	$ 3,460.72	$ 504.32	$ 3,965.04
Total Ontario Scale	451,150	—	26,760,191	5,001,904.87	121,494.32	79,639.04	201,133.36
Total Cubic Foot Measure	345,615	—	2,015,162.29	2,015,162.29	54,614.47	10,853.51	65,467.98
Total Cordage	—	51,902.48	—	4,411,710.80	135,811.60	6,368.95	142,180.55
GRAND TOTAL	838,259	51,902.48	—	11,568,676.39	$ 315,381.11	$ 97,365.82	$ 412,746.93

Number of permits issued and included in above — 20 $2,151.80

Conversion factor: 1 cubic foot = 5.35 board feet
1 cord = 85 cubic feet

KAPUSKASING

CUBIC FOOT MEASURE							
SAW-LOGS							
Balsam	57,766	—	296,277.15	296,277.15	$ 4,884.56	$ 4,379.34	$ 9,263.90
Birch, white	307	—	3,708.94	3,708.94	21.83	31.31	53.14
Cedar	107	—	1,128.80	1,128.80	18.59	—	18.59
Pine, jack	309,209	—	2,451,401.00	2,451,401.00	57,639.23	20,832.64	78,471.87
Poplar	7,403	—	77,249.66	77,249.66	457.31	547.18	1,004.49
Spruce	2,495,471	—	11,313,522.31	11,313,522.31	373,234.08	73,599.72	446,833.80
Tamarack	443	—	2,930.25	2,930.25	48.34	62.90	111.24
Total Saw-logs	2,870,706	—	14,146,218.11	14,146,218.11	$ 436,303.94	$ 99,453.09	$ 535,757.03
TREE LENGTH MATERIAL							
Balsam	10,777	—	53,249.15	53,249.15	$ 878.61	$ 824.86	$ 1,703.47
Pine, jack	3,877	—	83,100.86	83,100.86	1,952.87	1,537.37	3,490.24
Spruce	267,341	—	2,372,933.50	2,372,933.50	78,306.81	14,264.74	92,571.55
Total Tree Length Material	281,995	—	2,509,283.51	2,509,283.51	$ 81,138.29	$ 16,626.97	$ 97,765.26
BOOM TIMBER, PILING, POLES							
Pine, jack	27	—	400.28	400.28	$ 16.35	$ —	$ 16.35
Spruce	315	—	5,256.20	5,256.20	242.76	—	242.76
Total Boom Timber, Piling, Poles	342	—	5,656.48	5,656.48	$ 259.11	$ —	$ 259.11
Total Cubic Foot Measure	3,153,043	—	16,661,158.10	16,661,158.10	$ 517,701.34	$ 116,080.06	$ 633,781.40
CORDAGE							
PULPWOOD							
Balsam	—	10,925.99	—	928,709.15	$ 15,296.37	$ 4,955.37	$ 20,251.74
Pine, jack	—	114.31	—	9,716.35	228.62	11.99	240.61
Poplar	—	7,225.51	—	614,168.35	3,612.76	2,333.84	5,946.60
Spruce	—	342,023.52	—	29,071,999.20	957,700.46	156,287.95	1,113,988.41
Spruce (export levy)	—	(13,239.17)	—	(1,125,329.45)	—	13,239.17	13,239.17
Total Pulpwood	—	360,289.33	—	30,624,593.05	$ 976,838.21	$ 176,828.32	$ 1,153,666.53
FUELWOOD							
Hardwood	—	1,144.72	—	97,301.20	$ 572.36	$ —	$ 572.36
Total Fuelwood	—	1,144.72	—	97,301.20	$ 572.36	$ —	$ 572.36
BOLTS							
Birch, white	—	1.19	—	101.15	$ .61	$ .80	$ 1.41
Poplar	—	3,121.55	—	265,331.75	1,579.01	1,838.85	3,417.86
Total Bolts	—	3,122.74	—	265,432.90	$ 1,579.62	$ 1,839.65	$ 3,419.27
Total Cordage	—	364,556.79	—	30,987,327.15	$ 978,990.19	$ 178,667.97	$ 1,157,658.16
MISCELLANEOUS							
POSTS — lin. ft.							
Cedar	633	—	5,062	1,012.40	$ 50.62	$ —	$ 50.62
MINING TIMBER — cu. ft.							
Pine, jack	15	—	22.61	22.61	.54	.03	.57
Spruce	5,043	—	8,196.35	8,196.35	270.00	9.64	279.64
Total Miscellaneous	5,691	—	—	9,231.36	$ 321.16	$ 9.67	$ 330.83
Total Cubic Foot Measure	3,153,043	—	16,661,158.10	16,661,158.10	517,701.34	116,080.06	633,781.40
Total Cordage	—	364,556.79	—	30,987,327.15	978,990.19	178,667.97	1,157,658.16
GRAND TOTAL	3,158,734	364,556.79	—	47,657,716.61	$ 1,497,012.69	$ 294,757.70	$ 1,791,770.39

Number of permits issued and included in above — 430 $169,159.80

Conversion factor: 1 cubic foot = 5.35 board feet
1 cord = 85 cubic feet

Table 26 (Continued)

KEMPTVILLE

SPECIES	Pieces	Cords	Feet	Equivalent in cu. ft.	Dues $	Bonus $	Stumpage Value $
BOARD FOOT MEASURE							
ONTARIO SCALE							
Ash	262	—	11,541	2,157.20	$ 57.72	$ 28.63	$ 86.35
Balsam	34	—	855	159.81	3.42	5.06	8.48
Basswood	2,717	—	135,291	25,288.04	676.47	538.36	1,214.83
Beech	456	—	29,557	5,524.67	44.34	63.47	107.81
Birch, white	507	—	18,021	3,368.41	27.03	52.58	79.61
Birch, yellow	156	—	9,176	1,715.14	45.88	64.72	110.60
Butternut	119	—	6,168	1,152.90	9.25	45.01	54.26
Cedar	36	—	1,152	215.33	3.45	2.53	5.98
Cherry	02	—	236	44.11	1.18	.24	1.42
Elm	1,062	—	89,310	16,693.46	446.56	113.15	559.71
Hemlock	149	—	8,099	1,513.83	24.30	12.30	36.60
Maple	3,777	—	328,555	61,412.15	1,642.78	412.13	2,054.91
Oak	4,438	—	197,756	36,963.74	988.78	766.03	1,754.81
Pine, red	04	—	225	42.06	1.13	2.25	3.38
Pine, white	2,062	—	128,073	23,938.88	640.36	1,068.15	1,708.51
Poplar	1,289	—	54,349	10,158.69	81.53	163.22	244.75
Spruce	215	—	10,580	1,977.57	42.32	47.70	90.02
Total Ontario Scale	17,285	—	1,028,944	192,325.99	$ 4,736.50	$ 3,385.53	$ 8,122.03
CORDAGE							
PULPWOOD							
Maple	—	7.76	—	659.60	$ 3.88	$ 147.44	$ 151.32
Poplar	—	42.12	—	3,580.20	21.06	737.10	758.16
Spruce	—	3.93	—	334.05	11.00	79.39	90.39
Total Pulpwood	—	53.81	—	4,573.85	$ 35.94	$ 963.93	$ 999.87
Total Cordage	—	53.81	—	4,573.85	$ 35.94	$ 963.93	$ 999.87
Total Ontario Scale	17,285	—	1,028,944	192,325.99	4,736.50	3,385.53	8,122.03
GRAND TOTAL	17,285	53.81	—	196,899.84	$ 4,772.44	$ 4,349.46	$ 9,121.90

Number of permits issued and included in above — 5 $3,883.49

Conversion factor: 1 cubic foot = 5.35 board feet
1 cord = 85 cubic feet

KENORA

CUBIC FOOT MEASURE							
SAWLOGS							
Pine, jack	64,294	—	306,376.89	306,376.89	$ 7,199.87	$ 2,868.10	$ 10,067.97
Pine, red	12,476	—	77,456.92	77,456.92	2,556.07	3,207.44	5,763.51
Pine, white	6,321	—	74,712.87	74,712.87	2,465.53	3,297.05	5,762.58
Poplar	2,093	—	11,886.99	11,886.99	71.32	49.21	120.53
Spruce	25,688	—	172,899.87	172,899.87	5,705.69	2,547.57	8,253.26
Total Sawlogs	110,872	—	643,333.54	643,333.54	$ 17,998.48	$ 11,969.37	$ 29,967.85
BOOM TIMBER, PILING, POLES							
POLES							
Cedar	346	—	1,821.74	1,821.74	$ 70.19	$ —	$ 70.19
Pine, jack	6,049	—	78,075.93	78,075.93	3,148.03	1,396.00	4,544.03
Pine, red	1,412	—	25,797.72	25,797.72	1,182.31	823.64	2,005.95
Spruce	248	—	8,938.59	8,938.59	488.26	253.78	742.04
Total Boom Timber, Piling, Poles	8,055	—	114,633.98	114,633.98	$ 4,888.79	$ 2,473.42	$ 7,362.21
Total Cubic Foot Measure	118,927	—	757,967.52	757,967.52	$ 22,887.27	$ 14,442.79	$ 37,330.06
CORDAGE							
PULPWOOD							
Ash	—	75.52	—	6,419.20	$ 37.76	$ 7.55	$ 45.31
Balsam	—	2,363.10	—	200,863.50	3,308.36	1,576.89	4,885.25
Birch, white	—	1,952.50	—	165,962.50	976.26	195.25	1,171.51
Cedar	—	141.57	—	12,033.45	198.20	—	198.20
Pine, jack	—	168,679.27	—	14,337,737.95	337,253.68	39,934.20	377,187.88
Pine, red	—	52.52	—	4,464.20	73.41	198.55	271.96
Pine, white	—	11.27	—	957.95	15.78	33.54	49.32
Poplar	—	3,382.68	—	287,527.80	1,691.35	413.93	2,105.28
Poplar (export levy)	—	(876.00)	—	(74,460.00)	—	87.60	87.60
Spruce	—	174,052.50	—	14,794,462.50	475,437.07	74,709.63	550,146.70
Tamarack	—	5.84	—	496.40	8.18	—	8.18
Total Pulpwood	—	350,716.77	—	29,810,925.45	$ 819,000.05	$ 117,157.14	$ 936,157.19
FUELWOOD							
Hardwood	—	152.40	—	12,954.00	$ 76.20	$ 48.67	$ 124.87
Softwood	—	159.10	—	13,523.50	79.55	50.16	129.71
Total Fuelwood	—	311.50	—	26,477.50	$ 155.75	$ 98.83	$ 254.58
Total Cordage	—	351,028.27	—	29,837,402.95	$ 819,155.80	$ 117,255.97	$ 936,411.77
MISCELLANEOUS							
POSTS — Lin. Ft.							
Ash	48	—	768	153.60	$ 7.68	$ 5.12	$ 12.80
Cedar	6,441	—	53,664	10,732.80	536.64	142.56	679.20
CHRISTMAS TREES — Cu. Ft.	260	—	130.00	130.00	26.00	24.00	50.00
Total Miscellaneous	6,749	—	—	11,016.40	$ 570.32	$ 171.68	$ 742.00
Total Cubic Foot Measure	118,927	—	757,967.52	757,967.52	22,887.27	14,442.79	37,330.06
Total Cordage	—	351,028.27	—	29,837,402.95	819,155.80	117,255.97	936,411.77
GRAND TOTAL	125,676	351,028.27	—	30,606,386.87	$ 842,613.39	$ 131,870.44	$ 974,483.83
							$72,156.89

Number of permits issued and included in above — 249
Conversion factor: 1 cubic foot = 5.35 board feet
1 cord = 85 cubic feet

LAKE SIMCOE

SPECIES	Pieces	Cords	Feet	Equivalent in cu. ft.	Dues $	Bonus $	Stumpage Value $
BOARD FOOT MEASURE							
ONTARIO SCALE							
Pine, white	1,265	—	75,917	14,190.09	$ 379.59	$ 759.17	$ 1,138.76
Poplar	83	—	5,000	934.58	7.50	27.50	35.00
Total Ontario Scale	1,348	—	80,917	15,124.67	$ 387.09	$ 786.67	$ 1,173.76
CORDAGE							
PULPWOOD							
Pine, jack	—	51.00	—	4,335.00	$ 102.00	$ 535.50	$ 637.50
Pine, red	—	90.16	—	7,663.60	126.22	1,000.78	1,127.00
Total Pulpwood	—	141.16	—	11,998.60	$ 228.22	$ 1,536.28	$ 1,764.50
FUELWOOD							
Hardwood	—	25.00	—	2,125.00	$ 12.50	$ 7.50	$ 20.00
Total Fuelwood	—	25.00	—	2,125.00	$ 12.50	$ 7.50	$ 20.00
Total Cordage	—	166.16	—	14,123.60	$ 240.72	$ 1,543.78	$ 1,784.50
Total Ontario Scale	1,348	—	80,917	15,124.67	387.09	786.67	1,173.76
GRAND TOTAL	1,348	166.16	—	29,248.27	$ 627.81	$ 2,330.45	$ 2,958.26
							$1,193.76

Number of permits issued and included in above — 13
Conversion factor: 1 cubic foot = 5.35 board feet
1 cord = 85 cubic feet

LINDSAY

BOARD FOOT MEASURE							
ONTARIO SCALE							
Ash	784	—	35,092	6,559.25	$ 175.48	$ 96.24	$ 271.72
Balsam	869	—	24,315	4,544.86	97.25	284.41	381.66
Basswood	4,485	—	252,250	47,149.53	1,261.27	1,543.80	2,805.07
Beech	4,942	—	297,581	55,622.62	446.37	712.71	1,159.08
Birch, white	1,624	—	58,356	10,907.66	98.50	310.77	409.27
Birch, yellow	5,001	—	373,324	69,780.19	1,866.65	3,037.20	4,903.85
Cedar	1,263	—	25,550	4,775.70	76.66	112.27	188.93
Cherry	187	—	9,898	1,850.09	49.50	12.59	62.09
Elm	683	—	52,467	9,806.92	262.35	198.15	460.50
Hemlock	6,564	—	425,736	79,576.82	1,277.22	817.70	2,094.92
Maple	26,196	—	1,838,136	343,576.82	9,190.72	8,199.45	17,390.17
Oak	2,096	—	122,388	22,876.26	611.95	499.07	1,111.02
Pine, red	263	—	11,097	2,074.21	55.49	56.06	111.55
Pine, white	4,732	—	375,909	70,263.36	1,879.57	3,925.31	5,804.88
Poplar	2,200	—	123,674	23,116.64	185.51	245.96	431.47
Spruce	1,231	—	74,528	13,930.47	298.11	367.97	666.08
Total Ontario Scale	63,120	—	4,100,301	766,411.40	$ 17,832.60	$ 20,419.66	$ 38,252.26

Table 26 (Continued)

SPECIES	Pieces	Cords	Feet	Equivalent in cu. ft.	Dues $	Bonus $	Stumpage Value $
CUBIC FOOT MEASURE							
BOOMTIMBER, PILING, POLES							
BOOM AND DIMENSION TIMBER							
Cedar	03	—	73.72	73.72	$ 3.91	$ 2.21	$ 6.12
Hemlock	04	—	82.74	82.74	3.56	2.49	6.05
Pine, white	10	—	304.49	304.49	16.88	9.13	26.01
Spruce	136	—	821.17	821.17	53.92	37.79	91.71
Total Boomtimber, Piling, Poles	153	—	1,282.12	1,282.12	$ 78.27	$ 51.62	$ 129.89
Total Cubic Foot Measure	153	—	1,282.12	1,282.12	$ 78.27	$ 51.62	$ 129.89
CORDAGE							
PULPWOOD							
Balsam	—	46.97	—	3,992.45	$ 65.76	$ 638.79	$ 704.55
Beech	—	1.89	—	160.65	0.95	0.47	1.42
Birch, white	—	43.92	—	3,733.20	21.96	65.88	87.84
Total Pulpwood	—	92.78	—	7,886.30	$ 88.67	$ 705.14	$ 793.81
FUELWOOD							
Hardwood	—	217.41	—	18,479.85	$ 108.71	$ 54.36	$ 163.07
Softwood	—	1.67	—	141.95	.84	.42	1.26
Total Fuelwood	—	219.08	—	18,621.80	$ 109.55	$ 54.78	$ 164.33
Total Cordage	—	311.86	—	26,508.10	$ 198.22	$ 759.92	$ 958.14
MISCELLANEOUS							
POSTS							
Cedar — lin. ft.	1,421	—	12,312	2,462.40	$ 123.12	$ 5.60	$ 128.72
Total Miscellaneous	1,421	—	12,312	2,462.40	$ 123.12	$ 5.60	$ 128.72
Total Ontario Scale	63,120	—	4,100,301	766,411.40	17,832.60	20,149.66	38,252.26
Total Cubic Foot Measure	153	—	1,282.12	1,282.12	78.27	51.62	129.89
Total Cordage	—	311.86	—	26,508.10	198.22	759.92	958.14
GRAND TOTAL	64,694	311.86	—	796,664.02	$ 18,232.21	$ 21,236.80	$ 39,469.01

Number of permits issued and included in above — 42 $12,481.64

Conversion factor: 1 cubic foot = 5.35 board feet
1 cord = 85 cubic feet

NORTH BAY

BOARD FOOT MEASURE							
ONTARIO SCALE							
Ash	610	—	31,701	5,925.42	$ 158.55	$ 85.07	$ 243.62
Balsam	395	—	12,474	2,331.59	49.90	69.34	119.24
Basswood	2,260	—	136,974	25,602.62	684.88	443.12	1,128.00
Beech	08	—	487	91.03	.73	1.75	2.48
Birch, white	23,557	—	1,102,073	205,994.95	1,653.09	7,462.38	9,115.47
Birch, yellow	86,349	—	5,434,243	1,015,746.36	27,171.26	57,336.18	84,507.44
Cedar	6,496	—	179,737	33,595.70	539.21	607.02	1,146.23
Cherry	89	—	5,671	1,060.00	28.37	15.16	43.53
Elm	1,245	—	119,360	22,310.28	596.83	317.39	914.22
Hemlock	3,060	—	230,855	43,150.47	692.55	328.08	1,020.63
Maple	37,680	—	2,967,974	554,761.50	14,839.90	6,717.51	21,557.41
Oak	2,184	—	150,839	28,194.20	754.21	521.36	1,275.57
Pine, jack	76,726	—	1,753,687	327,791.96	7,014.75	9,076.94	16,091.69
Pine, red	196,732	—	14,001,227	2,617,051.78	70,006.20	61,499.94	131,506.14
Pine, white	370,541	—	36,440,703	6,811,346.36	182,203.60	209,635.48	391,839.08
Poplar	6,856	—	348,642	65,166.72	522.97	1,032.89	1,555.86
Spruce	34,008	—	1,809,596	338,242.24	7,238.41	7,456.78	14,695.19
Total Ontario Scale	848,796	—	64,726,243	12,098,363.18	$ 314,155.41	$ 362,606.39	$ 676,761.80
CUBIC FOOT MEASURE							
BOOMTIMBER, PILING, POLES							
BOOM AND DIMENSION TIMBER							
Cedar	34	—	732.92	732.92	$ 34.47	$ 21.99	$ 56.46
Pine, red	30	—	1,347.89	1,347.89	77.69	40.45	118.14
Pine, white	114	—	5,395.71	5,395.71	317.82	161.86	479.68
Spruce	45	—	2,223.71	2,223.71	132.35	66.70	199.05
POLES							
Balsam	75	—	210.28	210.28	6.31	6.30	12.61
Cedar	513	—	3,985.76	3,985.76	130.79	119.57	250.36
Pine, jack	4,952	—	13,026.96	13,026.96	884.63	390.81	1,275.44
Pine, red	5,997	—	101,492.29	101,492.29	4,711.27	3,044.79	7,756.06
Pine, white	274	—	2,681.05	2,681.05	110.97	80.43	191.40
Spruce	32,926	—	92,748.39	92,748.39	4,094.56	2,782.45	6,877.01
Total Boomtimber, Piling, Poles	44,960	—	223,844.96	223,844.96	$ 10,500.86	$ 6,715.35	$ 17,216.21
Total Cubic Foot Measure	44,960	—	223,844.96	223,844.96	$ 10,500.86	$ 6,715.35	$ 17,216.21
CORDAGE							
PULPWOOD							
Ash	—	205.85	—	17,497.25	$ 102.95	$ 103.22	$ 206.17
Balsam	—	1,721.91	—	146,362.35	2,410.68	355.00	2,765.68
Basswood	—	202.96	—	17,251.60	101.49	38.85	140.34
Beech	—	113.14	—	9,616.90	56.58	—	56.58
Birch, white	—	10,371.75	—	881,598.75	5,185.90	3,933.61	9,119.51
Birch, yellow	—	136.36	—	11,590.60	68.19	162.25	230.44
Cedar	—	270.19	—	22,966.15	378.27	—	378.27
Cherry	—	2.40	—	204.00	1.20	3.10	4.30
Elm	—	4.72	—	401.20	2.36	6.50	8.86
Hemlock	—	429.45	—	36,503.25	601.23	49.04	650.27
Maple	—	901.79	—	76,652.15	643.45	846.85	1,490.30
Oak	—	449.75	—	38,228.75	224.89	86.18	311.07
Pine, jack	—	12,245.10	—	1,040,833.50	24,490.20	1,477.80	25,968.00
Pine, red	—	81.78	—	6,951.30	114.49	25.89	140.38
Pine, white	—	708.33	—	60,208.05	991.65	380.56	1,372.21
Poplar	—	31,986.33	—	2,718,838.05	15,993.18	11,591.62	27,584.80
Poplar (export levy)	—	(3,302.13)	—	(280,681.05)	—	330.21	330.21
Spruce	—	6,015.05	—	511,279.25	16,842.13	1,946.76	18,788.89
Tamarack	—	2.92	—	248.20	4.08	1.76	5.84
Total Pulpwood	—	65,849.78	—	5,597,231.30	$ 68,212.92	$ 21,339.20	$ 89,552.12

Table 26 (Continued)

SPECIES	Pieces	Cords	Feet	Equivalent in cu. ft.-	Dues $	Bonus $	Stumpage Value $
FUELWOOD							
Hardwood	—	1,502.00	—	127,670.00	$ 751.00	$ 745.00	$ 1,496.00
Total Fuelwood	—	1,502.00	—	127,670.00	$ 751.00	$ 745.00	$ 1,496.00
Total Cordage	—	67,351.78	—	5,724,901.30	$ 68,963.92	$ 22,084.20	$ 91,048.12
Total Ontario Scale	848,796	—	64,726,243	12,098,363.18	314,155.41	362,606.39	676,761.80
Total Cubic Foot Measure	44,960	—	223,844.96	223,844.96	10,500.86	6,715.35	17,216.21
GRAND TOTAL	893,756	67,351.78	—	18,047,109.44	$ 393,620.19	$ 391,405.94	$ 785,026.13
							$78,517.96

Number of permits issued and included in above — 310
Conversion factor: 1 cubic foot = 5.35 board feet
1 cord = 85 cubic feet

PARRY SOUND

BOARD FOOT MEASURE

ONTARIO SCALE

Ash	1,305	—	92,065	17,208.41	$ 460.38	$ 319.84	$ 780.22
Balsam	112	—	4,582	856.45	18.33	10.34	28.67
Basswood	6,650	—	440,078	82,257.57	2,200.42	2,365.13	4,565.55
Beech	4,233	—	329,178	61,528.60	493.77	895.77	1,389.54
Birch, white	13,121	—	412,532	77,108.79	618.80	1,244.82	1,863.62
Birch, yellow	84,146	—	7,157,875	1,337,920.56	35,789.46	71,677.26	107,466.72
Cedar	336	—	13,164	2,460.56	39.49	21.40	60.89

Cherry	1,540	—	85,865	16,049.53	429.36	154.93	584.29
Elm	4,052	—	426,003	79,626.73	2,130.09	1,150.70	3,280.79
Hemlock	17,870	—	1,304,165	243,769.16	3,912.49	2,656.21	6,568.70
Maple	120,510	—	9,601,796	1,794,728.22	48,009.04	33,909.35	81,918.39
Oak	1,783	—	145,353	27,168.79	726.77	800.69	1,527.46
Pine, jack	20	—	1,000	186.92	4.00	2.50	6.50
Pine, red	511	—	25,555	4,776.63	127.77	224.24	352.01
Pine, white	17,768	—	1,381,723	258,265.98	6,908.69	10,675.60	17,584.29
Poplar	1,166	—	32,179	6,014.77	48.27	79.16	127.43
Spruce	17,747	—	1,051,666	196,573.08	4,206.66	5,505.63	9,712.29
Tamarack	31	—	1,016	189.91	3.05	5.36	8.41
Total Ontario Scale	292,701	—	22,505,795	4,206,690.66	$ 106,126.84	$ 131,698.93	$ 237,825.77
CUBIC FOOT MEASURE							
SAWLOGS							
Balsam	03	—	11.34	11.34	$ .19	$ .15	$ .34
Pine, jack	6,993	—	20,266.54	20,266.54	476.26	435.73	911.99
Pine, red	4,065	—	26,319.44	26,319.44	868.54	1,237.01	2,105.55
Pine, white	5,970	—	48,371.02	48,371.02	1,596.24	2,660.41	4,256.65
Poplar	21	—	115.61	115.61	.69	1.62	2.31
Spruce	503	—	3,446.59	3,446.59	113.74	127.52	241.26
Total Saw-logs	17,555	—	98,530.54	98,530.54	$ 3,055.66	$ 4,462.44	$ 7,518.10
BOOMTIMBER, PILING, POLES							
BOOM AND DIMENSION TIMBER							
Cedar	87	—	723.61	723.61	$ 21.71	$ —	$ 21.71
Hemlock	112	—	2,923.88	2,923.88	152.89	29.23	182.12
Pine, jack	715	—	5,659.96	5,659.96	188.51	56.60	245.11
Pine, red	301	—	6,324.62	6,324.62	261.69	284.04	545.73
Pine, white	54	—	1,300.09	1,300.09	66.83	39.00	105.83
Spruce	171	—	4,121.57	4,121.57	209.20	41.23	250.43
Tamarack	75	—	560.00	560.00	16.80	—	16.80
Total Boomtimber, Piling, Poles	1,515	—	21,613.73	21,613.73	$ 917.63	$ 450.10	$ 1,367.73
Total Cubic Foot Measure	19,070	—	120,144.27	120,144.27	$ 3,973.29	$ 4,912.54	$ 8,885.83
CORDAGE							
PULPWOOD							
Balsam	—	759.30	—	64,540.50	$ 1,063.02	$ 75.93	$ 1,138.95
Birch, white	—	518.98	—	44,113.30	259.49	259.49	518.98
Maple	—	171.01	—	14,535.85	85.50	85.51	171.01
Pine, jack	—	11.72	—	996.20	23.44	8.79	32.23
Poplar	—	2,892.57	—	245,868.45	1,446.28	1,951.87	3,398.15
Spruce	—	821.89	—	69,860.65	2,301.29	164.38	2,465.67
Tamarack	—	52.68	—	4,477.80	73.75	5.27	79.02
Total Pulpwood	—	5,228.15	—	444,392.75	$ 5,252.77	$ 2,551.24	$ 7,804.01
FUELWOOD							
Hardwood	—	1,353.84	—	115,076.40	$ 676.92	$ —	$ 676.92
Total Fuelwood	—	1,353.84	—	115,076.40	$ 676.92	$ —	$ 676.92
Total Cordage	—	6,581.99	—	559,469.15	$ 5,929.69	$ 2,551.24	$ 8,480.93
MISCELLANEOUS							
POSTS — lin. ft.							
Cedar	1,580	—	12,640	2,528.00	$ 126.40	$ —	$ 126.40
POKER POLES — cords							
Hardwood	—	2,152.10	—	182,928.50	1,076.06	538.02	1,614.08
Total Miscellaneous	1,580	2,152.10	—	185,456.50	$ 1,202.46	$ 538.02	$ 1,740.48
Total Ontario Scale	292,701	—	22,505,795	4,206,690.66	106,126.84	131,698.93	237,825.77
Total Cubic Foot Measure	19,070	—	120,144.27	120,144.27	3,973.29	4,912.54	8,885.83
Total Cordage	—	6,581.99	—	559,469.15	5,929.69	2,551.24	8,480.93
GRAND TOTAL	313,351	8,734.09	—	5,071,760.58	$ 117,232.28	$ 139,700.73	$ 256,933.01

Number of permits issued and included in above — 230 $42,708.97

Conversion factor: 1 cubic foot = 5.35 board feet
1 cord = 85 cubic feet

Table 26 (Continued)

PEMBROKE

SPECIES	Pieces	Cords	Feet	Equivalent in cu. ft.	Dues $	Bonus $	Stumpage Value $
BOARD FOOT MEASURE							
ONTARIO SCALE							
Ash	700	—	53,783	10,052.90	$ 264.89	$ 103.48	$ 368.37
Balsam	6,158	—	101,900	19,046.73	400.63	210.27	610.90
Basswood	7,061	—	524,134	97,968.97	2,620.69	1,841.73	4,462.42
Beech	4,562	—	312,560	58,422.43	468.86	546.28	1,015.14
Birch, white	25,433	—	1,266,857	236,795.70	1,935.03	1,623.41	3,558.44
Birch, yellow	117,279	—	9,858,926	1,842,789.91	49,291.31	79,965.07	129,256.38
Cedar	185	—	7,210	1,347.66	21.64	2.41	24.05
Cherry	315	—	23,746	4,438.50	118.74	25.70	144.44
Elm	1,522	—	187,872	35,116.26	939.39	235.21	1,174.60
Hemlock	129,921	—	9,857,819	1,842,582.99	29,573.47	15,202.53	44,776.00
Maple	160,603	—	13,578,085	2,537,959.81	67,879.85	17,814.58	85,694.43
Oak	6,258	—	339,411	63,441.31	1,690.44	851.02	2,541.46
Pine, jack	32,089	—	1,129,669	211,153.08	4,518.65	7,949.34	12,467.99
Pine, red	102,942	—	5,250,982	981,491.96	26,311.04	38,122.20	64,433.24
Pine, white	335,615	—	22,935,734	4,287,053.08	115,926.25	163,858.73	279,784.98
Poplar	99,615	—	4,815,358	900,066.92	7,209.24	7,091.76	14,301.00
Spruce	44,817	—	2,539,752	474,720.00	10,159.01	11,391.69	21,550.70
Tamarack	73	—	2,670	499.07	8.02	6.70	14.72
Total Ontario Scale	1,075,148	—	72,786,468	13,604,947.28	$ 319,337.15	$ 346,842.11	$ 666,179.26
CUBIC FOOT MEASURE							
SAWLOGS							
Pine, jack	105	—	1,099.20	1,099.20	$ 25.83	$ 194.01	$ 219.84
Pine, red	1,737	—	15,860.40	15,860.40	523.39	2,648.69	3,172.08
Total Sawlogs	1,842	—	16,959.60	16,959.60	$ 549.22	$ 2,842.70	$ 3,391.92
BOOMTIMBER, PILING, POLES							
BOOM AND DIMENSION TIMBER							
Hemlock	9,795	—	193,646.40	193,646.40	$ 9,737.79	$ 941.86	$ 10,679.65
Spruce	17	—	514.55	514.55	28.74	11.49	40.23
POLES							
Cedar	43	—	529.73	529.73	20.95	20.95	41.90
Pine, jack	10,259	—	161,938.88	161,938.88	6,796.08	13,209.84	20,005.92
Pine, red	21,574	—	492,357.61	492,357.61	24,338.46	45,083.02	69,421.48
Spruce	167	—	3,860.46	3,860.46	188.17	343.29	531.46
Total Boomtimber, Piling, Poles	41,855	—	852,847.63	852,847.63	$ 41,110.19	$ 59,610.45	$ 100,720.64
Total Cubic Foot Measure	43,697	—	869,807.23	869,807.23	$ 41,659.41	$ 62,453.15	$ 104,112.56
CORDAGE							
PULPWOOD							
Balsam	—	382.90	—	32,546.50	$ 536.06	$ 164.75	$ 700.81
Beech	—	17.10	—	1,453.50	8.55	—	8.55
Birch, white	—	699.98	—	59,498.30	350.01	199.09	549.10
Hemlock	—	438.19	—	37,246.15	613.47	—	613.47
Maple	—	6.10	—	518.50	3.05	—	3.05
Oak	—	80.16	—	6,813.60	40.08	—	40.08
Pine, jack	—	1,365.24	—	116,045.40	2,730.48	123.89	2,854.37
Pine, red	—	7.31	—	621.35	10.23	—	10.23
Pine, white	—	38.68	—	3,287.80	54.15	—	54.15
Poplar	—	11,448.28	—	973,103.80	5,724.18	2,214.94	7,939.12
Poplar (export levy)	—	(5,631.07)	—	(478,640.95)	—	563.11	563.11
Spruce	—	899.22	—	76,433.70	2,517.82	730.32	3,248.14
Total Pulpwood	—	15,383.16	—	1,307,568.60	$ 12,588.08	$ 3,996.10	$ 16,584.18
FUELWOOD							
Hardwood	—	309.84	—	26,336.40	$ 154.92	$ 15.00	$ 169.92
Total Fuelwood	—	309.84	—	26,336.40	$ 154.92	$ 15.00	$ 169.92

Total Cordage	—	15,693.00	—	1,333,905.00	$ 12,743.00	$ 4,011.10	$ 16,754.10
Total Ontario Scale	1,075,148	—	72,786,468	13,604,947.28	319,337.15	346,842.11	666,179.26
Total Cubic Foot Measure	43,697	—	869,807.23	869,807.23	41,659.41	62,453.15	104,112.56
GRAND TOTAL	1,118,845	15,693.00	—	15,808,659.51	$ 373,739.56	$ 413,306.36	$ 787,045.92

$52,297.75

Number of permits issued and included in above — 113
Conversion factor: 1 cubic foot = 5.35 board feet
1 cord = 85 cubic feet

Table 26 (Continued)

PORT ARTHUR

SPECIES	Pieces	Cords	Feet	Equivalent in cu. ft.	Dues $	Bonus $	Stumpage Value $
BOARD FOOT MEASURE							
ONTARIO SCALE							
Balsam	17	—	293	54.77	$ 1.17	$ .88	$ 2.05
Birch, white	27	—	751	140.37	1.13	.38	1.51
Cedar	4	—	269	50.28	.81	.53	1.34
Pine, jack	1,373	—	50,180	9,379.44	216.15	237.61	453.76
Pine, red	551	—	30,129	5,631.59	150.66	150.66	301.32
Pine, white	14,633	—	1,073,611	200,674.95	5,368.07	5,394.55	10,762.62
Poplar	631	—	31,600	5,906.54	47.41	8.07	55.48
Spruce	824	—	45,453	8,495.89	181.82	179.90	361.72
Total Ontario Scale	18,060	—	1,232,286	230,333.83	$ 5,967.22	$ 5,972.58	$ 11,939.80
CUBIC FOOT MEASURE							
SAW-LOGS							
Balsam	9,571	—	76,023.79	76,023.79	$ 1,252.57	$ 221.02	$ 1,473.59

Birch, white	5	—	20.50	20.50	.12	.19	.31
Pine, jack	301,257	—	3,331,143.10	3,331,143.10	78,362.42	8,332.61	86,695.03
Pine, red	7	—	94.69	94.69	3.12	2.56	5.68
Pine, white	1,818	—	22,141.85	22,141.85	730.68	598.91	1,329.59
Poplar	21,793	—	495,335.60	495,335.60	2,972.01	333.41	3,305.42
Spruce	501,961	—	3,744,836.33	3,744,836.33	123,368.05	17,565.63	140,933.68
Total Saw-logs	836,412	—	7,669,595.86	7,669,595.86	$ 206,688.97	$ 27,054.33	$ 233,743.30
TREE LENGTHS							
Balsam	483	—	3,846.94	3,846.94	$ 63.45	$ 36.31	$ 99.76
Pine, jack	160,653	—	1,917,579.05	1,917,579.05	45,088.24	6,001.79	51,090.03
Poplar	2,150	—	35,783.30	35,783.30	210.49	—	210.49
Spruce	36,736	—	304,161.60	304,161.60	10,032.23	2,888.57	12,920.80
Total Tree Lengths	200,022	—	2,261,370.89	2,261,370.89	$ 55,394.41	$ 8,926.67	$ 64,321.08
BOOM TIMBER, PILING, POLES							
BOOM AND DIMENSION TIMBER							
Pine, jack	15,650	—	235,398.46	235,398.46	$ 10,052.64	$ 2,353.99	$ 12,406.63
Pine, white	14	—	653.46	653.46	41.96	14.54	56.50
Spruce	1,214	—	41,121.44	41,121.44	2,362.43	411.20	2,773.63
POLES							
Pine, jack	3,785	—	52,657.45	52,657.45	2,165.74	700.80	2,866.54
Spruce	19	—	321.04	321.04	13.27	3.21	16.48
PILING							
Pine, jack	2,140	—	44,720.68	44,720.68	2,003.14	407.76	2,410.90
Pine, white	9	—	194.46	194.46	9.78	3.90	13.68
Spruce	1,197	—	32,583.75	32,583.75	1,397.41	289.79	1,687.20
Total Cubic Foot Measure	1,060,462	—	10,338,617.49	10,338,617.49	$ 280,129.75	$ 40,166.19	$ 320,295.94
Total Boom Timber, Piling, Poles	24,028	—	407,650.74	407,650.74	$ 18,046.37	$ 4,185.19	$ 22,231.56
CORDAGE							
PULPWOOD							
Balsam	—	31,823.33	—	2,704,983.05	$ 44,552.65	$ 13,552.55	$ 58,105.20
Birch, white	—	2,211.07	—	187,940.95	1,105.55	690.12	1,795.67
Cedar	—	23.41	—	1,989.85	32.77	14.05	46.82
Pine, jack	—	38,560.34	—	3,277,628.90	77,120.68	9,560.14	86,680.82
Poplar	—	5,082.77	—	432,035.45	2,541.40	2,402.91	4,944.31
Spruce	—	320,258.70	—	27,221,989.50	896,724.35	139,281.06	1,036,005.41
Tamarack	—	669.72	—	56,926.20	937.61	69.66	1,007.27
Total Pulpwood	—	398,629.34	—	33,883,493.90	$ 1,023,015.01	$ 165,570.49	$ 1,188,585.50
FUELWOOD							
Softwood	—	372.95	—	31,700.75	$ 186.48	$ 275.47	$ 461.95
Total Fuelwood	—	372.95	—	31,700.75	$ 186.48	$ 275.47	$ 461.95
BOLTS							
Birch, white	—	819.14	—	69,626.90	$ 409.59	$ 245.12	$ 654.71
Poplar	—	9,027.57	—	767,343.45	4,513.82	3,895.57	8,409.39
Poplar (export levy)	—	(2,300.00)	—	(195,500.00)	—	230.00	230.00
Total Bolts	—	9,846.71	—	836,970.35	$ 4,923.41	$ 4,370.69	$ 9,294.10
Total Cordage	—	408,849.00	—	34,752,165.00	$ 1,028,124.90	$ 170,216.65	$ 1,198,341.55
MISCELLANEOUS							
POSTS — lin. ft.							
Cedar	409	—	3,272	654.40	$ 32.72	$ —	$ 32.72
Total Miscellaneous	409	—	3,272	654.40	$ 32.72	$ —	$ 32.72
Total Ontario Scale	18,060	—	1,232,286	230,333.83	5,967.22	5,972.58	11,939.80
Total Cubic Foot Measure	1,060,462	—	10,338,617.49	10,338,617.49	280,129.75	40,166.19	320,295.94
Total Cordage	—	408,849.00	—	34,752,165.00	1,028,124.90	170,216.65	1,198,341.55
GRAND TOTAL	1,078,931	408,849.00	—	45,321,770.72	$ 1,314,254.59	$ 216,355.42	$ 1,530,610.01

Number of permits issued and included in above — 211 $38,744.09

Conversion factor: 1 cubic foot = 5.35 board feet
1 cord = 85 cubic feet

Table 26 (Continued)

SAULT STE. MARIE

SPECIES	Pieces	Cords	Feet	Equivalent in cu. ft.	Dues $	Bonus $	Stumpage Value $
BOARD FOOT MEASURE							
ONTARIO SCALE							
Ash	42	—	3,606	674.02	$ 18.05	$ 13.51	$ 31.56
Balsam	355	—	7,691	1,437.57	30.77	44.45	75.22
Birch, white	19,495	—	1,131,419	211,480.19	1,697.15	5,610.90	7,308.05
Birch, yellow	245,910	—	20,014,609	3,741,048.41	100,073.11	207,475.05	307,548.16
Cedar	167	—	5,972	1,116.26	17.92	26.46	44.38
Elm	762	—	75,793	14,166.92	379.00	232.50	611.50
Hemlock	5,141	—	496.413	92,787.48	1,489.26	1,377.51	2,866.77
Maple	102,092	—	7,879,741	1,472,848.79	39,398.77	26,942.93	66,341.70
Oak	2,125	—	202,397	37,831.21	1,012.02	923.59	1,935.61
Pine, jack	354	—	19,783	3,697.76	79.13	42.12	121.25
Pine, red	68,431	—	6,198,937	1,158,679.81	30,994.70	18,631.44	49,626.14
Pine, white	355,716	—	40,580,864	7,585,208.22	202,904.36	128,184.57	331,088.93
Poplar	1,474	—	94,377	17,640.56	141.57	257.12	398.69
Spruce	28,252	—	1,793,284	335,193.27	7,173.14	5,956.61	13,129.75
Total Ontario Scale	835,316	—	78,504,886	14,673,810.47	$ 385,408.95	$ 395,718.76	$ 781,127.71
CUBIC FOOT MEASURE							
SAWLOGS							
Balsam	228	—	2,736.36	2,736.36	$ 45.15	$ 64.30	$ 109.45
Birch, white	56	—	672.58	672.58	4.04	49.77	53.81
Cedar	46	—	397.00	397.00	6.55	13.30	19.85
Pine, jack	120	—	373.00	373.00	8.76	13.62	22.38
Poplar	24	—	198.00	198.00	1.19	4.75	5.94
Spruce	565	—	5,215.08	5,215.08	172.10	144.04	316.14
Tamarack	200	—	210.00	210.00	3.47	11.23	14.70
Total Sawlogs	1,239	—	9,802.02	9,802.02	$ 241.26	$ 301.01	$ 542.27
BOOM TIMBER, PILING, POLES							
POLES							
Birch, yellow	6	—	175.23	175.23	$ 9.42	$ 1.10	$ 10.52
Cedar	12	—	118.50	118.50	5.36	1.74	7.10
Hemlock	3	—	78.79	78.79	3.94	—	3.94
Maple	3	—	50.16	50.16	2.13	.87	3.00
Pine, jack	157	—	2,665.05	2,665.05	119.01	41.45	160.46
Pine, red	190	—	4,858.05	4,858.05	250.50	40.98	291.48
Pine, white	320	—	10,627.14	10,627.14	582.31	76.36	658.67
Spruce	136	—	2,069.93	2,069.93	93.15	31.34	124.49
Total Boom Timber, Piling, Poles	827	—	20,642.85	20,642.85	$ 1,065.82	$ 193.84	$ 1,259.66
Total Cubic Foot Measure	2,066	—	30,444.87	30,444.87	$ 1,307.08	$ 494.85	$ 1,801.93
CORDAGE							
PULPWOOD							
Balsam	—	2,915.56	—	247,822.60	$ 4,081.79	$ 704.59	$ 4,786.38
Birch, white	—	185.88	—	15,799.80	92.94	176.59	269.53
Pine, jack	—	240.81	—	20,468.85	481.62	373.45	855.07
Pine, red	—	22.86	—	1,943.10	32.01	34.52	66.53
Pine, white	—	221.10	—	18,793.50	309.54	759.96	1,069.50
Poplar	—	1,613.62	—	137,157.70	806.82	1,548.38	2,355.20
Poplar (export levy)	—	(19.80)	—	(1,683.00)	—	1.98	1.98
Spruce	—	5,004.66	—	425,396.10	14,013.06	2,566.70	16,579.76
Total Pulpwood	—	10,204.49	—	867,381.65	$ 19,817.78	$ 6,166.17	$ 25,983.95
FUELWOOD							
Hardwood	—	939.23	—	79,834.55	$ 469.62	$ 469.62	$ 939.24
Softwood	—	46.07	—	3,915.95	23.04	23.04	46.08
Total Fuelwood	—	985.30	—	83,750.50	$ 492.66	$ 492.66	$ 985.32
Total Cordage	—	11,189.79	—	951,132.15	$ 20,310.44	$ 6,658.83	$ 26,969.27

POSTS — lin. ft.							
Cedar	645	—	5,160	1,032.00	$ 51.60	$ 61.77	$ 113.37
MINING TIMBER — cu. ft.							
Pine, jack	101	—	554.20	554.20	13.00	10.73	23.73
Spruce	1,165	—	2,218.50	2,218.50	73.08	44.37	117.45
Total Miscellaneous	1,911	—	—	3,804.70	$ 137.68	$ 116.87	$ 254.55
Total Ontario Scale	835,316	—	78,504,886	14,673,810.47	385,408.95	395,718.76	781,127.71
Total Cubic Foot Measure	2,066	—	30,444.87	30,444.87	1,307.08	494.85	1,801.93
Total Cordage	—	11,189.79	—	951,132.15	20,310.44	6,658.83	26,969.27
GRAND TOTAL	839,293	11,189.79	—	15,659,192.19	$ 407,164.15	$ 402,989.31	$ 810,153.46

Number of permits issued and included in above — 110 $9,588.00

Conversion factor: 1 cubic foot = 5.35 board feet
1 cord = 85 cubic feet

Table 26 (Continued)

SIOUX LOOKOUT

SPECIES	Pieces	Cords	Feet	Equivalent in cu. ft.	Dues $	Bonus $	Stumpage Value $
BOARD FOOT MEASURE							
ONTARIO SCALE							
Balsam	143	—	15,251	2,850.65	$ 61.00	$ 30.50	$ 91.50
Pine, jack	154,489	—	3,034,775	567,247.66	12,139.10	1,920.86	14,059.96
Spruce	59,263	—	1,363,559	254,870.84	5,454.24	2,374.14	7,828.38
Total Ontario Scale	213,895	—	4,413,585	824,969.15	$ 17,654.34	$ 4,325.50	$ 21,979.84
CUBIC FOOT MEASURE							
SAWLOGS							
Pine, jack	157,046	—	555,237.61	555,237.61	$ 13,056.33	$ 2,116.77	$ 15,173.10
Pine, red	2,284	—	12,878.77	12,878.77	421.98	217.34	639.32
Poplar	227	—	1,492.59	1,492.59	8.97	5.97	14.94
Spruce	119,890	—	369,803.34	369,803.34	12,190.98	1,348.14	13,539.12
Total Sawlogs	279,447	—	939,412.31	939,412.31	$ 25,678.26	$ 3,688.22	$ 29,366.48
TREE LENGTHS							
Balsam	24,368	—	183,918.49	183,918.49	$ 3,935.85	$ 1,967.92	$ 5,903.77
Pine, jack	200,742	—	2,077,848.77	2,077,848.77	45,650.73	3,649.32	49,300.05
Spruce	297,218	—	2,327,576.15	2,327,576.15	49,898.31	24,832.29	74,730.60
Total Tree Lengths	522,328	—	4,589,343.41	4,589,343.41	$ 99,484.89	$ 30,449.53	$ 129,934.42
BOOM TIMBER, PILING, POLES							
BOOM AND DIMENSION TIMBER							
Pine, jack	168	—	1,914.00	1,914.00	$ 72.97	$ —	$ 72.97
Spruce	725	—	16,948.34	16,948.34	872.35	—	872.35
POLES							
Pine, jack	10,198	—	141,875.63	141,875.63	5,861.38	1,412.13	7,273.51
Pine, red	35	—	1,509.24	1,509.24	87.99	30.19	118.18
Total Boom Timber, Piling, Poles	11,126	—	162,247.21	162,247.21	$ 6,894.69	$ 1,442.32	$ 8,337.01
Total Cubic Foot Measure	812,901	—	5,691,002.93	5,691,002.93	$ 132,057.84	$ 35,580.07	$ 167,637.91
CORDAGE							
PULPWOOD							
Balsam	—	1,360.32	—	115,627.20	$ 1,904.45	$ 590.61	$ 2,495.06
Pine, jack	—	87,786.25	—	7,461,831.25	175,572.50	10,685.70	186,258.20
Spruce	—	139,232.26	—	11,834,742.10	388,552.70	22,587.74	411,140.44
Spruce (export levy)	—	(632.98)	—	(53,803.30)	—	632.98	632.98
Tamarack	—	15.30	—	1,300.50	21.42	1.53	22.95
Total Pulpwood	—	228,394.13	—	19,413,501.05	$ 566,051.07	$ 34,498.56	$ 600,549.63
FUELWOOD							
Softwood	—	2,498.73	—	212,392.05	$ 1,249.37	$ —	$ 1,249.37
Total Fuelwood	—	2,498.73	—	212,392.05	$ 1,249.37	$ —	$ 1,249.37
Total Cordage	—	230,892.86	—	19,625,893.10	$ 567,300.44	$ 34,498.56	$ 601,799.00
MISCELLANEOUS							
TIE BLOCKS — cu. ft.							
Pine, jack	65	—	458.15	458.15	$ 10.78	$ .54	$ 11.32
Total Miscellaneous	65	—	458.15	458.15	$ 10.78	$ .54	$ 11.32
Total Ontario Scale	213,895	—	4,413,585	624,969.15	17,654.34	4,325.50	21,979.84
Total Cubic Foot Measure	812,901	—	5,691,002.93	5,691,002.93	132,057.84	35,580.07	167,637.91
Total Cordage	—	230,892.86	—	19,625,893.10	567,300.44	34,498.56	601,799.00
GRAND TOTAL	1,026,861	230,892.86	—	26,142,323.33	$ 717,023.40	$ 74,404.67	$ 791,428.07
							$52,010.03

Number of permits issued and included in above — 190

Conversion factor: 1 cubic foot = 5.35 board feet

1 cord = 85 cubic feet

Table 26 (Continued)

SUDBURY

SPECIES	Pieces	Cords	Feet	Equivalent in cu. ft.	Dues $	Bonus $	Stumpage Value $
BOARD FOOT MEASURE							
ONTARIO SCALE							
Ash	5	—	340	63.55	$ 1.70	$ 1.70	$ 3.40
Birch, white	2,821	—	132,419	24,751.21	198.62	507.83	706.45
Birch, yellow	4,301	—	277,798	51,924.86	1,389.00	3,163.29	4,552.29
Cedar	688	—	27,381	5,117.94	82.15	85.83	167.98
Elm	3	—	199	37.20	1.00	1.00	2.00
Hemlock	35	—	2,477	462.99	7.43	2.48	9.91
Maple	361	—	34,174	6,387.66	170.87	34.17	205.04
Oak	53	—	7,433	1,389.35	37.17	14.87	52.04
Tamarack	10	—	570	106.54	1.71	2.28	3.99

Total Ontario Scale	8,277	—	482,791	90,241.30	$ 1,889.65	$ 3,813.45	$ 5,703.10
CUBIC FOOT MEASURE							
SAWLOGS							
Balsam	36	—	197.47	197.47	$ 3.27	$ 2.96	$ 6.23
Birch, white	49	—	332.30	332.30	2.00	1.56	3.56
Pine, jack	212,773	—	1,014,026.27	1,014,026.27	23,685.17	2,602.36	26,287.53
Pine, red	91,152	—	632,458.50	632,458.50	20,871.14	17,865.32	38,736.46
Pine, white	109,314	—	1,151,805.59	1,151,805.59	38,009.58	33,349.01	71,358.59
Poplar	831	—	4,596.34	4,596.34	27.57	42.42	69.99
Spruce	57,477	—	301,234.03	301,234.03	9,940.72	1,529.25	11,469.97
Total Sawlogs	471,632	—	3,104,650.50	3,104,650.50	$ 92,539.45	$ 55,392.88	$ 147,932.33
BOOM TIMBER, PILING, POLES							
BOOM AND DIMENSION TIMBER							
Pine, jack	417	—	6,127.34	6,127.34	$ 254.47	$ 61.28	$ 315.75
Pine, red	749	—	19,009.43	19,009.43	999.74	188.31	1,188.05
Pine, white	33	—	824.84	824.84	42.10	5.23	47.33
Spruce	103	—	2,152.52	2,152.52	107.64	60.02	167.66
POLES							
Cedar	140	—	1,059.91	1,059.91	35.69	52.99	88.68
Pine, jack	526	—	11,261.41	11,261.41	542.45	135.11	677.56
Pine, red	4,026	—	109,888.62	109,888.62	5,824.83	1,118.27	6,943.10
Spruce	74	—	1,678.22	1,678.22	84.00	16.79	100.79
Total Boom Timber, Piling, Poles	6,068	—	152,002.29	152,002.29	$ 7,890.92	$ 1,638.00	$ 9,528.92
Total Cubic Foot Measure	477,700	—	3,256,652.79	3,256,652.79	$ 100,430.37	$ 57,030.88	$ 157,461.25
CORDAGE							
PULPWOOD							
Ash	—	24.10	—	2,048.50	$ 12.05	$ 12.05	$ 24.10
Balsam	—	724.06	—	61,545.10	1,013.68	757.48	1,771.16
Birch, white	—	597 76	—	50,809.60	298.89	247.74	546.63
Pine, jack	—	64,060.55	—	5,445,146.75	128,121.10	871.66	128,992.76
Pine, red	—	635.49	—	54,016.65	889.69	1,058.62	1,948.31
Pine, white	—	260.26	—	22,122.10	364.36	94.46	458.82
Poplar	—	4,526.85	—	384,782.25	2,263.43	2,521.45	4,784.88
Spruce	—	9,645.16	—	819,838.60	27,006.41	774.95	27,781.36
Total Pulpwood	—	80,474.23	—	6,840,309.55	$ 159,969.61	$ 6,338.41	$ 166,308.02
FUELWOOD							
Hardwood	—	728.50	—	61,922.50	$ 364.25	$ 364.75	$ 729.00
Softwood	—	17.00	—	1,445.00	8.50	8.50	17.00
Total Fuelwood	—	745.50	—	63,367.50	$ 372.75	$ 373.25	$ 746.00
Total Cordage	—	81,219.73	—	6,903,677.05	$ 160,342.36	$ 6,711.66	$ 167,054.02
MISCELLANEOUS							
POSTS — lin. ft.							
Balsam	55	—	521	104.20	$ 4.61	$ —	$ 4.61
Cedar	631	—	5,843	1,168.60	58.43	137.54	195.97
Spruce	151	—	2,034	406.80	20.34	—	20.34
POKER POLES — cords							
Hardwood	—	562.00	—	47,770.00	281.00	140.50	421.50
MINING TIMBER — cu. ft.							
Pine, red	25,996	—	3,249.55	3,249.55	53.52	108.96	162.48
Pine, white	184	—	22.95	22.95	.38	.77	1.15
Poplar	1,000	—	1,750.00	1,750.00	20.00	—	20.00
Total Miscellaneous	28,017	562.00	—	54,472.10	$ 438.28	$ 387.77	$ 826.05
Total Ontario Scale	8,277	—	482,791	90,241.30	1,889.65	3,813.45	5,703.10
Total Cubic Foot Measure	477,700	—	3,256,652.79	3,256,652.79	100,430.37	51,030.88	157,461.25
Total Cordage	—	81,219.73	—	6,903,677.05	$ 160,342.36	$ 6,711.66	$ 167,054.02
GRAND TOTAL	513,994	81,781.73	—	10,305,043.24	$ 263,100.66	$ 67,943.76	$ 331,044.42
							$16,580.31

Number of permits issued and included in above — 209
Conversion factor: 1 cubic foot = 5.35 board feet
1 cord = 85 cubic feet

Table 26 (Continued)

SWASTIKA

SPECIES	Pieces	Cords	Feet	Equivalent in cu. ft.	Dues $	Bonus $	Stumpage Value $
BOARD FOOT MEASURE							
ONTARIO SCALE							
Birch, yellow	711	—	44,366	8,292.71	$ 221.83	$ —	$ 221.83
Pine, jack	310,380	—	7,615,906	1,423,533.83	30,463.62	11,423.86	41,887.48
Pine, white	4,448	—	344,684	64,426.92	1,723.42	2,585.13	4,308.55
Spruce	26,534	—	608,495	113,737.38	2,433.98	2,038.46	4,472.44
Total Ontario Scale	342,073	—	8,613,451	1,609,990.84	$ 34,842.85	$ 16,047.45	$ 50,890.30
CUBIC FOOT MEASURE							
SAWLOGS							
Balsam	47,152	—	290,630.15	290,630.15	$ 4,795.40	$ 145.31	$ 4,940.71
Birch, white	4,003	—	34,803.36	34,803.36	208.81	87.76	296.57
Pine, jack	1,018,953	—	4,677,319.32	4,677,319.32	109,917.01	69,412.29	179,329.30
Poplar	70,443	—	597,683.99	597,683.99	3,586.09	3,847.45	7,433.54
Spruce	320,769	—	1,798,240.48	1,798,240.48	59,341.95	16,016.55	75,358.50
Total Sawlogs	1,461,320	—	7,398,677.30	7,398,677.30	$ 177,849.26	$ 89,509.36	$ 267,358.62
BOOM TIMBER, PILING, POLES							
POLES							
Pine, jack	10,668	—	193,011.25	193,011.25	$ 8,728.22	$ 4,779.76	$ 13,507.98
Spruce	37	—	889.00	889.00	44.66	12.31	56.97
Total Boom Timber, Piling, Poles	10,705	—	193,900.25	193,900.25	$ 8,772.88	$ 4,792.07	$ 13,564.95
Total Cubic Foot Measure	1,472,025	—	7,592,577.55	7,592,577.55	$ 186,622.14	$ 94,301.43	$ 280,923.57
CORDAGE							
PULPWOOD							
Balsam	—	5,212.37	—	443,051.45	$ 7,297.32	$ 2,362.04	$ 9,659.36
Birch, white	—	104.87	—	8,913.95	52.43	88.57	141.00
Pine, jack	—	6,435.64	—	547,029.40	12,871.28	219.37	13,090.65
Poplar	—	8,757.07	—	744,350.95	4,378.56	2,205.66	6,584.22
Spruce	—	59,387.49	—	5,047,936.65	166,284.97	27,526.02	193,810.99
Tamarack	—	17.15	—	1,457.75	19.06	15.24	34.30
Total Pulpwood	—	79,914.59	—	6,792,740.15	$ 190,903.62	$ 32,416.90	$ 223,320.52
FUELWOOD							
Hardwood	—	890.93	—	75,729.05	$ 445.47	$ —	$ 445.47
Softwood	—	165.89	—	14,100.65	82.95	4.33	87.28
Total Fuelwood	—	1,056.82	—	89,829.70	$ 528.42	$ 4.33	$ 532.75
BOLTS							
Birch, white	—	1,657.41	—	140,879.85	$ 828.72	$ 830.38	$ 1,659.10
Poplar	—	5,557.42	—	472,380.70	2,778.75	2,891.26	5,670.01
Total Bolts	—	7,214.83	—	613,260.55	$ 3,607.47	$ 3,721.64	$ 7,329.11
Total Cordage	—	88,186.24	—	7,495,830.40	$ 195,039.51	$ 36,142.87	$ 231,182.38
MISCELLANEOUS							
POSTS — lin. ft.							
Cedar	7,925	—	64,472	12,894.40	$ 644.72	$ —	$ 644.72
MINING TIMBER — cu. ft.							
Pine, jack	443	—	4,206.65	4,206.65	98.98	—	98.98
Spruce	9,813	—	17,333.36	17,333.36	570.44	66.16	636.60
Total Miscellaneous	18,181	—	—	34,434.41	$ 1,314.14	$ 66.16	$ 1,380.30
Total Ontario Scale	342,073	—	8,613,451	1,609,990.84	34,842.85	16,047.45	50,890.30
Total Cubic Foot Measure	1,472,025	—	7,592,577.55	7,592,577.55	186,622.14	94,301.43	280,923.57
Total Cordage	—	88,186.24	—	7,495,830.40	195,039.51	36,142.87	231,182.38
GRAND TOTAL	1,832,279	88,186.24	—	16,732,833.20	$ 417,818.64	$ 146,557.91	$ 564,376.55
							$66,907.36

Number of permits issued and included in above — 280
Conversion factor: 1 cubic foot = 5.35 board feet
1 cord = 85 cubic feet

TWEED

BOARD FOOT MEASURE

ONTARIO SCALE

Ash	2,532	—	91,664	17,133.46	$ 458.39	$ 387.34	$ 845.73
Balsam	5,511	—	148,156	27,692.71	592.65	872.48	1,465.13
Basswood	18,525	—	877,951	164,102.99	4,389.82	8,850.06	13,239.88
Beech	16,738	—	730,253	136,495.89	1,095.38	2,802.28	3,897.66
Birch, white	12,198	—	426,423	79,705.23	639.66	3,039.35	3,679.01
Birch, yellow	8,968	—	565,556	105,711.40	2,827.85	6,229.69	9,057.54
Butternut	1	—	130	24.30	.20	1.17	1.37
Cedar	3,402	—	94,812	17,721.87	284.44	251.97	536.41
Cherry	240	—	8,811	1,646.92	44.07	99.87	143.94
Elm	2,523	—	188,276	35,191.78	941.41	699.31	1,640.72
Hemlock	11,169	—	618,065	115,526.17	1,854.19	2,356.01	4,210.20
Maple	60,911	—	3,787,751	707,990.84	18,938.82	20,617.36	39,556.18
Oak	11,867	—	493,942	92,325.61	2,469.78	2,933.32	5,403.10
Pine, red	14,666	—	688,244	128,643.74	3,441.29	3,562.00	7,003.29
Pine, white	71,859	—	4,293,211	802,469.35	21,466.15	31,064.48	52,530.63
Poplar	35,178	—	1,512,799	282,766.17	2,269.21	4,359.56	6,628.77
Spruce	23,091	—	1,066,752	199,392.90	4,266.99	6,569.79	10,836.78
Tamarack	293	—	7,755	1,449.53	23.26	31.68	54.94
Total Ontario Scale	299,672	—	15,600,551	2,915,990.86	$ 66,003.56	$ 94,727.72	$ 160,731.28

CUBIC FOOT MEASURE

BOOM TIMBER, PILING, POLES

BOOM AND DIMENSION TIMBER

Balsam	1	—	18.44	18.44	$ .74	$ —	$ .74
Hemlock	78	—	895.27	895.27	41.67	14.97	56.64
Pine, red	9	—	147.03	147.03	6.14	—	6.14
Pine, white	13	—	256.18	256.18	11.43	—	11.43
Spruce	599	—	1,361.66	1,361.66	45.66	6.56	52.22

POLES

Balsam	17	—	149.40	149.40	5.42	3.00	8.42
Cedar	126	—	844.89	844.89	30.90	16.95	47.85
Hemlock	86	—	1,146.87	1,146.87	48.08	22.94	71.02
Oak	1	—	11.17	11.17	.31	.45	.76
Pine, red	41	—	621.66	621.66	25.73	13.73	39.46
Pine, white	10	—	201.28	201.28	9.26	5.30	14.56
Spruce	191	—	2,892.52	2,892.52	124.00	63.03	187.03
Total Boom Timber, Piling, Poles	1,172	—	8,546.37	8,546.37	$ 349.34	$ 146.93	$ 496.27
Total Cubic Foot Measure	1,172	—	8,546.37	8,546.37	$ 349.34	$ 146.93	$ 496.27

Table 26 (Continued)

SPECIES	Pieces	Cords	Feet	Equivalent in cu. ft.	Dues $	Bonus $	Stumpage Value $
CORDAGE							
PULPWOOD							
Ash	—	676.86	—	57,533.10	$ 338.46	$ 211.03	$ 549.49
Balsam	—	1,430.39	—	121,583.15	2,002.54	703.34	2,705.88
Basswood	—	62.72	—	5,331.20	31.35	15.68	47.03
Beech	—	1,774.16	—	150,803.60	887.07	568.75	1,455.82
Birch, white	—	848.98	—	72,163.30	424.52	263.10	687.62
Birch, yellow	—	110.66	—	9,406.10	55.35	45.06	100.41
Cedar	—	20.96	—	1,781.60	29.34	2.10	31.44
Elm	—	2,005.98	—	170,508.30	1,002.98	655.42	1,658.40
Hemlock	—	27.02	—	2,296.70	37.83	3.72	41.55
Maple	—	6,115.26	—	519,797.10	3,057.63	2,040.55	5,098.18
Oak	—	368.30	—	31,305.50	184.16	105.43	289.59
Pine, white	—	174.51	—	14,833.35	244.31	—	244.31
Poplar	—	4,437.58	—	377,194.30	2,218.77	836.40	3,055.17
Spruce	—	946.68	—	80,467.80	2,650.71	47.63	2,698.34
Tamarack	—	18.04	—	1,533.40	25.26	1.66	26.92
Tamarack (export levy)	—	(16.55)	—	(1,406.75)	—	1.66	1.66
Total Pulpwood	—	19,018.10	—	1,616,538.50	$ 13,190.28	$ 5,501.53	$ 18,691.81
FUELWOOD							
Hardwood	—	140.86	—	11,973.10	$ 70.44	$ 32.58	$ 103.02
Softwood	—	4.00	—	340.00	2.00	1.00	3.00
Total Fuelwood	—	144.86	—	12,313.10	$ 72.44	$ 33.58	$ 106.02
Total Cordage	—	19,162.96	—	1,628,851.60	$ 13,262.72	$ 5,535.11	$ 18,797.83
MISCELLANEOUS							
POSTS — lin. ft.							
Cedar	4,563	—	35,504	7,300.80	$ 365.04	$ —	$ 365.04
MINING TIMBER — cu. ft.							
Spruce	165	—	319.60	319.60	10.53	4.32	14.85
Tamarack	175	—	313.65	313.65	5.17	4.24	9.41
Total Miscellaneous	4,903	—	—	7,934.05	$ 380.74	$ 8.56	$ 389.30
Total Ontario Scale	299,672	—	15,600,551	2,915,990.86	66,003.56	94,727.72	160,731.28
Total Cubic Foot Measure	1,172	—	8,546.37	8,546.37	349.34	146.93	496.27
Total Cordage	—	19,162.96	—	1,628,851.60	13,262.72	5,535.11	18,797.83
GRAND TOTAL	305,747	19,162.96	—	4,561,322.88	$ 79,996.36	$ 100,418.32	$ 180,414.68
							$58,317.15

Number of permits issued and included in above — 170
Conversion factor: 1 cubic foot = 5.35 board feet
1 cord = 85 cubic feet

WHITE RIVER

CUBIC FOOT MEASURE								
SAWLOGS								
Birch, white	2,328	—	17,603.89	17,603.89	$ 105.63	$ 950.60	$	1,056.23
Pine, jack	311,865	—	2,536,608.11	2,536,608.11	59,610.29	20,179.58		79,789.87
Spruce	65,830	—	474,390.45	474,390.45	15,654.88	1,445.22		17,100.10
Total Sawlogs	380,023	—	3,028,602.45	3,028,602.45	$ 75,370.80	$ 22,575.40	$	97,946.20
BOOM TIMBER, PILING, POLES								
POLES								
Pine, jack	2,684	—	53,329.47	53,329.47	$ 2,396.04	$ 533.30	$	2,929.34
Total Boom Timber, Piling, Poles	2,684	—	53,329.47	53,329.47	$ 2,396.04	$ 533.30	$	2,929.34
Total Cubic Foot Measure	382,707	—	3,081,931.92	3,081,931.92	$ 77,966.84	$ 23,108.70	$	100,875.54
CORDAGE								
PULPWOOD								
Balsam	—	1,000.69	—	85,058.65	$ 1,400.96	$ 491.38	$	1,892.34
Pine, jack	—	6,183.30	—	525,580.50	12,366.60	618.33		12,984.93
Spruce	—	26,458.64	—	2,248,984.40	74,084.19	11,338.03		85,422.22
Total Pulpwood	—	33,642.63	—	2,859,623.55	$ 87,851.75	$ 12,447.74	$	100,299.49
FUELWOOD								
Hardwood	—	55.00	—	4,675.00	$ 27.50	$ 27.50	$	55.00
Softwood	—	41.00	—	3,485.00	20.50	20.50		41.00
Total Fuelwood	—	96.00	—	8,160.00	$ 48.00	$ 48.00	$	96.00
BOLTS								
Birch, white	—	130.88	—	11,124.80	$ 66.75	$ 244.74	$	311.49
Total Bolts	—	130.88	—	11,124.80	$ 66.75	$ 244.74	$	311.49
Total Cordage	—	33,869.51	—	2,878,908.35	$ 87,966.50	$ 12,740.48	$	100,706.98
MISCELLANEOUS								
POSTS — lin. ft.								
Cedar	50	—	300	60.00	$ 3.00	$ 3.00	$	6.00
MINING TIMBER — cu. ft.								
Pine, jack	347	—	1,645.44	1,645.44	38.67	31.15		69.82
Spruce	2,616	—	3,035.41	3,035.41	95.87	68.29		164.16
Total Miscellaneous	3,013	—	—	4,740.85	$ 137.54	$ 102.44	$	239.98
Total Cubic Foot Measure	382,707	—	3,081,931.92	3,081,931.92	77,766.84	23,108.70		100,875.54
Total Cordage	—	33,869.51	—	2,878,908.35	87,966.50	12,740.48		100,706.98
GRAND TOTAL	385,720	33,869.51	—	5,965,581.12	$ 165,870.88	$ 35,951.62	$	201,822.50
								$1,392.21

Number of permits issued and included in above — 30
Conversion factor: 1 cubic foot = 5.35 board feet
1 cord = 85 cubic feet

Table 27

TIMBER SALES FROM APRIL 1, 1966 TO MARCH 31, 1967

Date Sold 1966	Locality	Area Sq. M.	No. of Tenders	To Whom Sold	Kind of Timber	Bid $	Bonus $	Dues $	Total $
Apr. 1	Devine Township	15.0	7	Weldwood of Canada Limited, Box 395, Woodstock, Ont.	spruce sawlogs	$ 2.00	$ 6.00	$ 4.00	$12.00 per MBM
					hemlock sawlogs	4.00	2.00	3.00	9.00 per MBM
					yellow birch sawlogs	20.00	15.00	5.00	40.00 per MBM
					maple sawlogs	14.00	7.00	5.00	26.00 per MBM
					beech sawlogs	2.00	1.50	1.50	5.00 per MBM
Apr. 29	Blount Township	0.1	1	Edouard Clement, Brower, Ont.	spruce pulpwood	0.25	0.55	2.80	3.60 per cord
					balsam pulpwood	0.30	0.80	1.40	2.50 per cord
May 5	Boys Township	2.8	1	William Perchuk, East Braintree, Man.	jack pine sawlogs	—	0.0119	0.0235	0.0354 per cu. ft.
					spruce pulpwood	0.10	2.20	2.80	5.10 per cord
					jack pine pulpwood	—	1.00	2.00	3.00 per cord
					jack pine poles				
					(a) not more than 10 cu. ft.	—	0.03	0.03	0.06 per cu. ft.
					(b) more than 10 cu. ft. but not more than 20 cu. ft.	—	0.03	0.04	0.07 per cu. ft.
					(c) more than 20 cu. ft. but not more than 30 cu. ft.	—	0.03	0.05	0.08 per cu. ft.
					(d) more than 30 cu. ft.	—	0.03	0.06	0.09 per cu. ft.
May 6	Tennyson Township	0.6	5	L. Vincent Burns, Box 222, Massey, Ont.	white pine sawlogs	0.02	0.017	0.033	0.07 per cu. ft.
					red pine sawlogs	0.02	0.017	0.033	0.07 per cu. ft.
					jack pine sawlogs	0.02	0.0265	0.0235	0.07 per cu. ft.
					spruce sawlogs	0.02	0.017	0.033	0.07 per cu. ft.
					white pine pulpwood	2.50	0.60	1.40	4.50 per cord
					red pine pulpwood	2.00	1.10	1.40	4.50 per cord
					jack pine pulpwood	2.00	0.50	2.00	4.50 per cord
					spruce pulpwood	1.20	0.50	2.80	4.50 per cord
					balsam pulpwood	2.50	0.60	1.40	4.50 per cord
					poplar pulpwood	0.50	0.50	0.50	1.50 per cord
					white birch pulpwood	0.50	0.50	0.50	1.50 per cord
May 6	Lyndoch Township	.02	2	Ernest Keller, Bruceton, Ont.	white pine sawlogs	5.00	8.00	5.00	18.00 per MBM
					spruce sawlogs	4.00	10.00	4.00	18.00 per MBM
					cedar sawlogs	2.00	3.00	3.00	8.00 per MBM
					hemlock sawlogs	2.50	3.00	3.00	8.50 per MBM
					yellow birch sawlogs	5.00	9.00	5.00	19.00 per MBM
					white birch sawlogs	3.00	4.50	1.50	9.00 per MBM
					poplar sawlogs	2.00	3.50	1.50	7.00 per MBM
					maple sawlogs	5.00	6.00	5.00	16.00 per MBM
					basswood sawlogs	3.00	9.00	5.00	17.00 per MBM
					oak sawlogs	4.00	5.00	5.00	14.00 per MBM
					beech sawlogs	5.00	3.50	1.50	10.00 per MBM
					balsam pulpwood	0.70	0.40	1.40	2.50 per cord
					hardwood pulpwood	0.50	0.25	0.50	1.25 per cord
May 9	Lyndoch Township	.01	2	Samuel Behm, R.R. #1, Hardwood Lake, Ont.	white pine sawlogs	3.00	8.00	5.00	16.00 per MBM
					red pine sawlogs	3.00	8.00	5.00	16.00 per MBM
					white birch sawlogs	1.00	4.50	1.50	7.00 per MBM
					poplar sawlogs	1.50	3.50	1.50	6.50 per MBM
					maple sawlogs	2.50	6.00	5.00	13.50 per MBM
					basswood sawlogs	2.00	9.00	5.00	16.00 per MBM
					oak sawlogs	3.00	5.00	5.00	13.00 per MBM
					beech sawlogs	1.50	3.50	1.50	6.50 per MBM
					hardwood pulpwood	—	0.25	0.50	0.75 per cord
May 16	Pelican Township	0.7	1	M. J. Morrison, R.R. #2, Kenora, Ont.	jack pine pulpwood	0.01	0.75	2.00	2.76 per cord
					spruce pulpwood	0.21	1.70	2.80	4.71 per cord
					balsam pulpwood	0.21	0.60	1.40	2.21 per cord
May 27	Fournier Township	0.1	1	C. Shier & Sons, Hunta, Ont.	spruce pulpwood	1.00	0.20	2.80	4.00 per cord
					balsam pulpwood	1.00	0.40	1.40	2.80 per cord
May 30	Beaver Lake Area	1.0	2	Arnold E. Canfield, R.R. #1, Kenora, Ont.	spruce pulpwood	0.25	1.20	2.80	4.25 per cord
					balsam pulpwood	1.00	0.60	1.40	3.00 per cord
					jack pine pulpwood	0.15	0.25	2.00	2.40 per cord
May 31	Temple Township	6.6	2	Hoey & McMillan Limited, Box 2019,	spruce pulpwood	2.00	0.20	2.80	5.00 per cord
					balsam pulpwood	0.60	—	1.40	2.00 per cord

				Bryden, Ont.	jack pine pulpwood	0.75	—	2.00	2.75 per cord
					red pine pulpwood	6.25	—	1.40	7.65 per cord
June 16	Attlee Township	0.3	3	Roger Fryer, Monetville, Ont.	spruce sawlogs	5.00	6.00	4.00	15.00 per MBM
					cedar sawlogs	13.00	4.00	3.00	20.00 per MBM
					hemlock sawlogs	13.50	1.00	3.00	17.50 per MBM
					yellow birch sawlogs	24.00	12.00	5.00	41.00 per MBM
					white birch sawlogs	13.00	5.50	1.50	20.00 per MBM
					maple sawlogs	12.00	3.00	5.00	20.00 per MBM
					spruce pulpwood	—	0.20	2.80	3.00 per cord
					white birch pulpwood	0.10	0.15	0.50	0.75 per cord
June 27	McClure Township	0.1	4	G. W. Martin Lumber Limited, Harcourt, Ont.	spruce sawlogs	10.00	11.00	4.00	25.00 per MBM
					balsam sawlogs	10.00	7.00	4.00	21.00 per MBM
					hemlock sawlogs	4.00	5.00	3.00	12.00 per MBM
					yellow birch sawlogs	15.00	11.00	5.00	31.00 per MBM
					white birch sawlogs	10.00	6.50	1.50	18.00 per MBM
					maple sawlogs	7.00	7.00	5.00	19.00 per MBM
					basswood sawlogs	13.00	10.00	5.00	28.00 per MBM
					ash sawlogs	11.00	6.00	5.00	22.00 per MBM
					elm sawlogs	17.00	5.00	5.00	27.00 per MBM
					cherry sawlogs	17.00	6.00	5.00	28.00 per MBM
					beech sawlogs	10.00	4.50	1.50	16.00 per MBM
June 29	Kennedy Township	0.1	2	Howard Recoskie, Box 521, Cochrane, Ont.	spruce pulpwood	1.21	0.55	2.80	4.56 per cord
					balsam pulpwood	2.36	0.80	1.40	4.56 per cord
June 29	Kennedy Township	0.1	1	Guy Lauzon, Driftwood, Ont.	spruce pulpwood	0.76	0.55	2.80	4.11 per cord
					balsam pulpwood	1.01	0.80	1.40	3.21 per cord
June 30	Livingstone Township	7.0	1	Weldwood of Canada Limited, Woodstock, Ont.	white pine sawlogs	0.50	10.00	5.00	15.50 per MBM
					spruce sawlogs	0.25	6.00	4.00	10.25 per MBM
					balsam sawlogs	—	4.00	4.00	8.00 per MBM
					hemlock sawlogs	0.25	2.00	3.00	5.25 per MBM
					yellow birch sawlogs	10.00	15.00	5.00	30.00 per MBM
					white birch sawlogs	2.50	3.00	1.50	7.00 per MBM
					maple sawlogs	2.25	7.00	5.00	14.25 per MBM
					basswood sawlogs	1.00	7.00	5.00	13.00 per MBM
					oak sawlogs	0.50	4.00	5.00	9.50 per MBM
					ash sawlogs	—	3.00	5.00	8.00 per MBM
					cherry sawlogs	—	5.00	5.00	10.00 per MBM
					beech sawlogs	—	3.00	1.50	4.50 per MBM
Aug. 2	Cardiff Township	0.2	6	W. W. Purdy, 757 Water Street, Peterborough, Ont.	maple sawlogs	12.00	8.00	5.00	25.00 per MBM
					basswood sawlogs	12.00	8.00	5.00	25.00 per MBM
					yellow birch sawlogs	14.00	11.00	5.00	30.00 per MBM
					hemlock sawlogs	5.00	5.00	3.00	13.00 per MBM
					spruce sawlogs	—	10.00	4.00	14.00 per MBM
					balsam sawlogs	—	4.00	4.00	8.00 per MBM
					elm sawlogs	—	5.00	5.00	10.00 per MBM
					white birch sawlogs	—	6.50	1.50	8.00 per MBM
					poplar sawlogs	—	4.50	1.50	6.00 per MBM
					beech sawlogs	—	4.50	1.50	6.00 per MBM
Aug. 3	Herschel Township	0.1	4	Clarence Wasmund, Maple Leaf, Ont.	white pine sawlogs	5.00	10.00	5.00	20.00 per MBM
					spruce sawlogs	5.00	11.00	4.00	20.00 per MBM
					balsam sawlogs	4.00	6.00	4.00	14.00 per MBM
					cedar sawlogs	—	5.00	3.00	8.00 per MBM
					hemlock sawlogs	4.00	5.00	3.00	12.00 per MBM
					yellow birch sawlogs	15.00	10.00	5.00	30.00 per MBM
					poplar sawlogs	—	4.50	1.50	6.00 per MBM
					maple sawlogs	14.00	7.00	5.00	26.00 per MBM
					basswood sawlogs	11.00	10.00	5.00	26.00 per MBM
					ash sawlogs	4.00	6.00	5.00	15.00 per MBM
					elm sawlogs	5.00	5.00	5.00	15.00 per MBM
					cherry sawlogs	4.00	6.00	5.00	15.00 per MBM
					beech sawlogs	4.00	6.50	1.50	12.00 per MBM
Aug. 3	Herschel Township	0.1	4	Clarence Wasmund, Maple Leaf, Ont.	hemlock sawlogs	4.00	5.00	3.00	12.00 per MBM
					yellow birch sawlogs	15.00	10.00	5.00	30.00 per MBM
					maple sawlogs	14.00	7.00	5.00	26.00 per MBM
					basswood sawlogs	11.00	10.00	5.00	26.00 per MBM
					ash sawlogs	4.00	6.00	5.00	15.00 per MBM
					elm sawlogs	5.00	5.00	5.00	15.00 per MBM

Table 27 (Continued)

Date Sold 1966	Locality	Area Sq. M.	No. of Tenders	To Whom Sold	Kind of Timber	Bid $	Bonus $	Dues $	Total $
					cherry sawlogs	4.00	6.00	5.00	15.00 per MBM
					beech sawlogs	4.00	6.50	1.50	12.00 per MBM
Aug. 23	Hindon Township	2.8	5	Alva Thompson & Sons Limited, Clear Lake, Ont.	white pine sawlogs	7.50	7.50	5.00	20.00 per MBM
					spruce sawlogs	5.00	6.00	4.00	15.00 per MBM
					balsam sawlogs	4.00	2.00	4.00	10.00 per MBM
					cedar sawlogs	4.00	1.00	3.00	8.00 per MBM
					hemlock sawlogs	6.00	1.00	3.00	10.00 per MBM
					yellow birch sawlogs	13.00	12.00	5.00	30.00 per MBM
					white birch sawlogs	9.00	4.50	1.50	15.00 per MBM
					poplar sawlogs	6.00	2.50	1.50	10.00 per MBM
					maple sawlogs	10.00	5.00	5.00	20.00 per MBM
					basswood sawlogs	8.00	5.00	5.00	18.00 per MBM
					oak sawlogs	6.00	1.00	5.00	12.00 per MBM
					ash sawlogs	8.00	1.00	5.00	14.00 per MBM
					elm sawlogs	6.00	1.00	5.00	12.00 per MBM
					cherry sawlogs	6.00	1.00	5.00	12.00 per MBM
					beech sawlogs	9.00	4.50	1.50	15.00 per MBM
Aug. 24	Dixie Lake Area	1.4	2	G. Sotke, Box 221, Red Lake, Ont.	jack pine sawlogs	0.002	0.0035	0.0235	0.029 per cu. ft.
					spruce pulpwood	0.75	0.40	2.80	3.95 per cord
Aug. 24	Dixie Lake Area	1.4	1	William Saskosky, Red Lake, Ont.	jack pine sawlogs	0.55	0.35	2.35	3.25 per MBM
					spruce pulpwood	0.15	0.40	2.80	3.35 per cord
Aug. 25	Dixie Lake Area	2.0	1	G. Sotke, Box 221, Red Lake, Ont.	jack pine sawlogs	0.002	0.0035	0.0235	0.029 per cu. ft.
					spruce pulpwood	0.95	0.40	2.80	4.15 per cord
Aug. 26	Dixie Lake Area	1.7	1	Walter Tuzyk, Red Lake, Ont.	jack pine sawlogs	0.005	0.0035	0.0235	0.032 per cu. ft.
					spruce pulpwood	0.10	0.40	2.80	3.30 per cord
Aug. 31	Marchington Working Circle	1.7	3	A. J. Labelle, Box 177, Hudson, Ont.	spruce pulpwood	1.35	0.20	2.80	4.35 per cord
					jack pine pulpwood	1.05	—	2.00	3.05 per cord
					balsam pulpwood	1.25	0.10	1.40	2.75 per cord
Sept. 1	Marchington Working Circle	0.9	2	Ernest P. Hoey, 44 Wellington Street, Sioux Lookout, Ont.	spruce pulpwood	1.20	0.20	2.80	4.20 per cord
					jack pine pulpwood	—	—	2.00	2.00 per cord
					balsam pulpwood	—	0.10	1.40	1.50 per cord
Sept. 1	Marchington Working Circle	0.9	3	Albert Beck, Box 819, Sioux Lookout, Ont.	spruce pulpwood	1.50	0.20	2.80	4.50 per cord
					jack pine pulpwood	.25	—	2.00	2.25 per cord
					balsam pulpwood	.75	0.10	1.40	2.25 per cord
Sept. 2	Marchington Working Circle	2.2	1	S. Matusow, Hudson, Ont.	spruce pulpwood	1.25	0.20	2.80	4.25 per cord
					jack pine pulpwood	—	—	2.00	2.00 per cord
					balsam pulpwood	—	0.10	1.40	1.50 per cord
Sept. 2	Marchington Working Circle	1.2	1	R. E. Bowman, Box 66, Hudson, Ont.	spruce pulpwood	1.05	0.20	2.80	4.05 per cord
					jack pine pulpwood	—	—	2.00	2.00 per cord
					balsam pulpwood	—	0.10	1.40	1.50 per cord
Sept. 2	Marchington Working Circle	3.9	2	J. C. E. Daignault, 58 Lakeshore, Sioux Lookout, Ont.	spruce pulpwood	0.50	0.20	2.80	3.50 per cord
					jack pine pulpwood	—	—	2.00	2.00 per cord
					balsam pulpwood	—	0.10	1.40	1.50 per cord
Sept. 8	Haycock Township	2.9	1	Mrs. Lucille E. Derouard, R.R. #1, Kenora, Ont.	spruce pulpwood	0.25	1.70	2.80	4.75 per cord
					jack pine pulpwood	—	0.60	1.40	2.00 per cord
					balsam pulpwood	0.35	0.65	2.00	3.00 per cord
Oct. 19	Bridgland Township	0.1	7	T. G. Fleron Limited, Thessalon, Ont.	spruce sawlogs	—	3.00	4.00	7.00 per MBM
					hemlock sawlogs	—	2.00	3.00	5.00 per MBM
					yellow birch sawlogs	36.50	15.00	5.00	56.50 per MBM
					white birch sawlogs	20.00	12.50	1.50	34.00 per MBM
					maple sawlogs	5.00	5.00	5.00	15.00 per MBM
Oct. 20	Ashby Township	0.1	3	Darwyn Neuman, Palmer Rapids, Ont.	white pine sawlogs	12.00	8.00	5.00	25.00 per MBM
					spruce sawlogs	14.00	9.00	4.00	27.00 per MBM
					balsam sawlogs	8.00	5.00	4.00	17.00 per MBM
					cedar sawlogs	6.00	6.00	3.00	15.00 per MBM
					hemlock sawlogs	3.00	4.00	3.00	10.00 per MBM
					yellow birch sawlogs	19.00	11.00	5.00	35.00 per MBM
					white birch sawlogs	20.00	4.00	1.50	25.50 per MBM

					basswood sawlogs	18.00	11.00	5.00	34.00 per MBM
					oak sawlogs	14.00	5.00	5.00	24.00 per MBM
					ash sawlogs	10.00	5.00	5.00	20.00 per MBM
					elm sawlogs	10.00	5.00	5.00	20.00 per MBM
					beech sawlogs	9.50	5.50	1.50	16.50 per MBM
					hardwood pulpwood	—	0.25	0.50	0.75 per cord
Oct. 21	Gould Township	0.1	4	Ernest Bigelow, R.R. #1, Thessalon, Ont.	hemlock sawlogs	—	2.00	3.00	5.00 per MBM
					yellow birch sawlogs	22.00	15.00	5.00	42.00 per MBM
					maple sawlogs	12.00	5.00	5.00	22.00 per MBM
					oak sawlogs	6.00	5.00	5.00	16.00 per MBM
Nov. 1	Wicklow Township	0.2	3	Clarence Wasmund, Maple Leaf, Ont.	spruce sawlogs	4.00	12.00	4.00	20.00 per MBM
					balsam sawlogs	8.00	6.00	4.00	18.00 per MBM
					hemlock sawlogs	4.00	5.00	3.00	12.00 per MBM
					yellow birch sawlogs	14.00	11.00	5.00	30.00 per MBM
					poplar sawlogs	1.00	4.50	1.50	7.00 per MBM
					maple sawlogs	13.00	8.00	5.00	26.00 per MBM
					beech sawlogs	6.00	4.50	1.50	12.00 per MBM
					balsam pulpwood	1.00	0.60	1.40	3.00 per cord
					hardwood pulpwood	—	0.25	0.50	0.75 per cord
Nov. 4	Scarfe Township	0.1	2	Howard Bordeleau, Box 1323, Blind River, Ont.	white pine sawlogs	5.00	10.00	5.00	20.00 per MBM
					spruce sawlogs	3.00	8.00	4.00	15.00 per MBM
					hemlock sawlogs	2.00	5.00	3.00	10.00 per MBM
					yellow birch sawlogs	17.00	20.00	5.00	42.00 per MBM
					white birch sawlogs	2.00	13.50	1.50	17.00 per MBM
					maple sawlogs	4.00	7.00	5.00	16.00 per MBM
					oak sawlogs	4.00	5.00	5.00	14.00 per MBM
					ash sawlogs	1.00	5.00	5.00	11.00 per MBM
					elm sawlogs	1.00	5.00	5.00	11.00 per MBM
Nov. 15	Hagerman Township	0.6	2	John Milne, Burks Falls, Ont.	spruce sawlogs	5.00	6.00	4.00	15.00 per MBM
					yellow birch sawlogs	25.00	10.00	5.00	40.00 per MBM
					maple sawlogs	10.00	5.00	5.00	20.00 per MBM
					basswood sawlogs	17.00	8.00	5.00	30.00 per MBM
					oak sawlogs	10.00	5.00	5.00	20.00 per MBM
					ash sawlogs	10.00	5.00	5.00	20.00 per MBM
					elm sawlogs	10.00	5.00	5.00	20.00 per MBM
Nov. 22	Freeman Township	0.6	6	Bert Taylor Construction Limited, Box 1012, Parry Sound, Ont.	white pine sawlogs	1.00	10.00	5.00	16.00 per MBM
					spruce sawlogs	1.00	6.00	4.00	11.00 per MBM
					balsam sawlogs	1.00	6.00	4.00	11.00 per MBM
					hemlock sawlogs	2.00	2.00	3.00	7.00 per MBM
					yellow birch sawlogs	36.50	15.00	5.00	56.50 per MBM
					maple sawlogs	21.50	10.00	5.00	36.50 per MBM
					basswood sawlogs	4.00	7.00	5.00	16.00 per MBM
					oak sawlogs	2.00	5.00	5.00	12.00 per MBM
					ash sawlogs	1.00	4.00	5.00	10.00 per MBM
					elm sawlogs	3.00	4.00	5.00	12.00 per MBM
					cherry sawlogs	1.00	4.00	5.00	10.00 per MBM
					beech sawlogs	1.00	3.50	1.50	6.00 per MBM
Nov. 24	Blair Township	3.6	3	George Bouverat	white pine sawlogs	2.50	10.00	5.00	17.50 per MBM
					red pine sawlogs	1.50	7.00	5.00	13.50 per MBM
					jack pine sawlogs	1.00	6.00	4.00	11.00 per MBM
					spruce sawlogs	1.00	8.00	4.00	13.00 per MBM
					balsam sawlogs	—	1.00	4.00	5.00 per MBM
					yellow birch sawlogs	3.00	17.00	5.00	25.00 per MBM
					white birch sawlogs	3.50	8.50	1.50	13.50 per MBM
					poplar sawlogs	1.00	3.50	1.50	6.00 per MBM
					maple sawlogs	3.00	7.00	5.00	15.00 per MBM
					basswood sawlogs	2.00	10.00	5.00	17.00 per MBM
					oak sawlogs	2.00	10.00	5.00	17.00 per MBM
					ash sawlogs	2.00	5.00	5.00	12.00 per MBM
					elm sawlogs	2.00	5.00	5.00	12.00 per MBM
					balsam pulpwood	0.60	0.10	1.40	2.10 per cord
					jack pine pulpwood	0.50	0.75	2.00	3.25 per cord
					white birch pulpwood	1.00	0.50	0.50	2.00 per cord
					poplar pulpwood	0.30	0.50	0.50	1.30 per cord
					hardwood pulpwood	0.30	0.50	0.50	1.30 per cord
Nov. 24	Hardy Township	0.2	8	Clarence Brooks,	yellow birch sawlogs	20.00	15.00	5.00	40.00 per MBM

Table 27 (Continued)

Date Sold 1966	Locality	Area Sq. M.	No. of Tenders	To Whom Sold	Kind of Timber	Bid $	Bonus $	Dues $	Total $
				Loring, Ont.	maple sawlogs	18.00	7.00	5.00	30.00 per MBM
					basswood sawlogs	15.00	10.00	5.00	30.00 per MBM
					ash sawlogs	10.00	5.00	5.00	20.00 per MBM
					elm sawlogs	10.00	5.00	5.00	20.00 per MBM
Nov. 28	Laurier Township	0.1	3	Alex E. Preston, Sundridge, Ont.	yellow birch sawlogs	20.00	15.00	5.00	40.00 per MBM
					maple sawlogs	13.00	5.00	5.00	23.00 per MBM
					elm sawlogs	2.00	5.00	5.00	12.00 per MBM
					cherry sawlogs	4.00	5.00	5.00	14.00 per MBM
					beech sawlogs	5.00	3.50	1.50	10.00 per MBM
Nov. 29	Chisholm Township	0.1	2	Bernard V. Young, 680 King Street N., Box 2, Powassan, Ont.	yellow birch sawlogs	15.00	15.00	5.00	35.00 per MBM
					poplar sawlogs	3.50	3.50	1.50	8.50 per MBM
					maple sawlogs	6.00	7.00	5.00	18.00 per MBM
					basswood sawlogs	5.00	10.00	5.00	20.00 per MBM
					ash sawlogs	5.00	5.00	5.00	15.00 per MBM
					elm sawlogs	5.00	5.00	5.00	15.00 per MBM
					beech sawlogs	6.00	3.50	1.50	11.00 per MBM
1967									
Feb. 21	Horne Township	3.2	10	Albert Kapush Contracting Limited, R.R. #2, Port Arthur, Ont.	jack pine sawlogs	0.0485	0.0115	0.0235	0.0835 per cu. ft.
					spruce sawlogs	0.052	0.015	0.033	0.10 per cu. ft.
					spruce pulpwood	2.52	0.50	2.80	5.82 per cord
					balsam pulpwood	3.00	0.25	1.40	4.65 per cord
					jack pine pulpwood	2.28	0.25	2.00	4.53 per cord
					white birch pulpwood	0.90	0.25	0.50	1.65 per cord
					poplar pulpwood	1.05	0.25	0.50	1.80 per cord
					poplar of veneer quality	—	0.25	0.50	0.75 per cord
Mar. 16	Hendrie Township	1.5	1	Rheal Chartrand, 60 Notre Dame East, Noelville, Ont.	white pine sawlogs	—	0.042	0.033	0.075 per cu. ft.
					red pine sawlogs	—	0.047	0.033	0.08 per cu. ft.
					jack pine sawlogs	—	0.0565	0.0235	0.08 per cu. ft.
					spruce sawlogs	—	0.017	0.033	0.05 per cu. ft.
					white birch sawlogs	—	0.024	0.006	0.03 per cu. ft.
					poplar sawlogs	—	0.024	0.006	0.03 per cu. ft.
					spruce pulpwood	—	0.50	2.80	3.30 per cord
					balsam pulpwood	1.05	0.30	1.40	2.75 per cord
					jack pine pulpwood	0.25	0.50	2.00	2.75 per cord
					white pine pulpwood	1.00	0.35	1.40	2.75 per cord
					red pine pulpwood	1.00	0.35	1.40	2.75 per cord
					white birch pulpwood	0.25	0.50	0.50	1.25 per cord
					poplar pulpwood	0.25	0.50	0.50	1.25 per cord
					other hardwoods	0.25	0.50	0.50	1.25 per cord

Table 28

CROWN TIMBER LICENCES 1966-67 — ISSUED BY VIRTUE OF SECTION 3(1) OF C.T.A.

DATE	LICENSEE	LOCATION	Expiry March 31st	Type of Transaction
April 12/66	A. E. Jacobson Lumber Co. Ltd., Box 234, Port Arthur, Ontario	Unsurveyed Territory, Thunder Bay District	1966	New
April 15/66	Abitibi Paper Co. Ltd., 408 University Avenue, Toronto 2, Ontario	Townships 28, 29, 30, Range 23, etc.	1967	New
April 21/65	Sheppard & Morse Ltd., Chapleau, Ontario	Townships 126, 10H, 9H, etc.	1974	New
May 5/66	Abitibi Paper Co. Ltd., 408 University Avenue, Toronto 2, Ontario	Unsurveyed Territory, Thunder Bay District	1967	New
May 5/66	Field Lumber (1956) Ltd., Field, Ontario	Hobbs, Kenny, Clement Townships, etc.	1974	Re-issue
May 6/66	Peterborough Lumber Co. Ltd., Peterborough, Ontario	Anstruther, Cavendish, Galway Townships	1974	Re-issue
May 6/66	Abitibi Paper Co. Ltd., 408 University Avenue, Toronto 2, Ontario	Goodfellow and Fallis Townships	1967	New
May 17/66	Rene Ross, Red Lake Road, Ontario	Unsurveyed Territory, Kenora District	1967	New
May 17/66	Jack Lankinen, R.R. #1, South Gillies, Ontario	Fraleigh and Devon Townships	1969	Re-issue
May 17/66	Kirkland Timber Ltd., Kirkland Lake, Ontario	Bompas Township	1969	Re-issue
May 17/66	F. J. Hulton, Parry Sound, Ontario	Conger Township	1967	New
May 17/66	Widjiitiwin Corporation, St. Mary's Indian School, Box 40, Kenora, Ontario	Bridges Township	1969	Re-issue
May 24/66	Isidore Roy, 175 Front Street, Sturgeon Falls, Ontario	Davis Township	1967	New
May 24/66	The Great Lakes Paper Co. Ltd., Fort William, Ontario	Unsurveyed Territory, Thunder Bay District	1967	New
May 24/66	Louis Brun, Field, Ontario	Janes and McNish Townships	1967	New
May 24/66	John B. Smith & Sons Ltd., Callandar, Ontario	McCallum and Torrington Townships	1971	New
May 24/66	Paul Lahaie Ltd., P.O. Box 204, Foleyet, Ontario	Coppell Township	1968	Re-issue
May 31/66	Malette Lumber Limited, 373 Commercial Avenue, Timmins, Ontario	Cote and Massey Township	1967	Re-issue
May 31/66	G. A. Querel, Vermilion Bay, Ontario	Unsurveyed Territory, Kenora District	1967	New
May 31/66	H. P. Lamothe Lumber Co. Ltd., 347 Sherbrooke Street, North Bay, Ontario	Charlton, Fell and Blyth Townships	1967	New
May 31/66	Joseph Kirouac, Red Lake Road, Ontario	Unsurveyed Territory, Kenora District	1967	New
June 9/66	James A. Gibson and Sons Ltd., P.O. Box 734, North Bay, Ontario	Merrick and Stewart Townships	1967	New

Table 28 (Continued)

DATE	LICENSEE	LOCATION	Expiry March 31st	Type of Transaction
June 9/66	Maurice Ouellette, Box 1183, Dryden, Ontario	Unsurveyed Territory, Kenora District	1967	New
June 9/66	Leonard Jones, Red Lake Road, Ontario	Unsurveyed Territory, Kenora District	1967	New
June 23/66	The Great Lakes Paper Co. Ltd., Box 430, Fort William, Ontario	Unsurveyed Territory, Thunder Bay District	1967	New
June 23/66	The Great Lakes Paper Co. Ltd., Box 430, Fort William, Ontario	Unsurveyed Territory, Thunder Bay District	1967	New
June 23/66	A. E. Jacobson Lumber Co. Ltd., 223 South Hill Street, Port Arthur, Ontario	Haines Township and Unsurveyed Territory, Thunder Bay District	1969	Re-issue
June 23/66	A. E. Jacobson Lumber Co. Ltd., 223 South Hill Street, Port Arthur, Ontario	Unsurveyed Territory, Thunder Bay District	1969	Re-issue
June 23/66	Jamar Plywood Ltd., P.O. Box 520, Kirkland Lake, Ontario	Arnold, Gauthier, Katrine Townships, etc.	1969	Re-issue
June 23/66	Polar Lumber Company, Ltd., Hearst, Ontario	Rogers Township	1967	New
June 23/66	G. K. Stringer, P.O. Box 983, South Porcupine, Ontario	Macklem Township	1971	Re-issue
June 23/66	Northern Forest Products, P.O. Box 990, Port Arthur, Ontario	Unsurveyed Territory, Thunder Bay District	1968	Re-issue
June 23/66	Wm. Pollock & Son Ltd., Englehart, Ontario	Sharpe and Truax Townships	1969	Re-issue
June 23/66	William A. McMurray, Gilmour, Ontario	Cashel Township	1969	Re-issue
June 28/66	Reginald F. Walker, Englehart, Ontario	Mulligan Township	1969	New
June 28/66	Murray Bros. Lumber Co. Ltd., Barry's Bay, Ontario	Niven and Dickson Townships	1968	New
June 28/66	Jake E. Stewart Limited, Chalk River, Ontario	Head Rolph and Bronson Townships	1969	Re-issue
June 28/66	Feldman Timber Co. Ltd., Timmins, Ontario	Denton Township	1973	Re-issue
June 30/66	Pedskalny Timber Co. Ltd., Nellie Lake, Ontario	Little Township	1969	Re-issue
June 30/66	Wellington Couch, South Gillies, Ontario	Fraleigh Township	1969	Re-issue
June 30/66	Bruce Campbell, Vermilion Bay, Ontario	Unsurveyed Territory, Kenora District	1967	New
June 30/66	Lecours Lumber Co., Calstock, Ontario	Rogers Township	1967	New
June 30/66	J. Lafreniere and Sons Ltd., P.O. Box 126, Sturgeon Falls, Ontario	Angus, Parkman and Burnaby Townships	1968	Re-issue
June 30/66	Sam Mitchell, Englehart, Ontario	Mulligan Township	1969	New
June 30/66	A. G. Wilson, Boulter, Ontario	Lorrain and South Lorrain Township	1969	Re-issue
June 30/66	Grant Lumber Company Ltd., New Liskeard, Ontario	Smyth and Davidson Townships	1969	Re-issue
June 30/66	J. E. Martel & Sons Lumber Ltd., Chapleau, Ontario	Floranna Township	1967	Re-issue

	1723 Algonquin Avenue, North Bay, Ontario	Hartle and Burnaby Townships	1969	Re-issue
July 5/66	Feldman Timber Co. Ltd., Timmins, Ontario	Langmuir Township	1973	Re-issue
July 5/66	Namakon Timber Co. Ltd., 561 Webster Avenue, Fort Frances, Ontario	Unsurveyed Territory, Rainy River District	1971	Re-issue
July 5/66	Kormak Lumber Co. Ltd., 6 Dufferin Street, Sudbury, Ontario	Nimitz Township	1969	New
July 5/66	Island Lake Lumber Co. Ltd., Chapleau, Ontario	Township 13H	1970	New
July 5/66	Pearson Forest Products, Ltd., Box 219, Fort Frances, Ontario	Unsurveyed Territory, Rainy River District	1971	New
July 8/66	McIntyre-Porcupine Mines Ltd., Schumacher, Ontario	Sewell Township	1971	New
July 8/66	A. & L. Lafreniere Lumber Ltd., Chapleau, Ontario	Racine Township	1967	New
July 8/66	J. H. Normick Limited, La Sarre, Quebec	Sargeant Township	1967	Re-issue
July 8/66	John B. Smith & Sons Ltd., Callander, Ontario	Fell Township	1967	New
July 11/66	Weyerhaeuser Canada Ltd., Sault Ste. Marie, Ontario	Livingstone and McClintock Townships	1969	Re-issue
July 11/66	Peter Thomson & Sons Ltd., Alliston, Ontario	McCraney Township	1972	Re-issue
July 19/66	Grant and Wilson, c/o Grant & Wilson Lumber Ltd., Swastika, Ontario	Gillies Limit Township	1969	Re-issue
July 19/66	Rudolph McChesney Lumber Co. Ltd., Timmins, Ontario	Kenogaming Township	1970	New
July 19/66	J. H. Normick Limited, La Sarre, Quebec	Marriott and Stroughton Townships	1967	Re-issue
July 19/66	Kirkland Timber Ltd., Kirkland Lake, Ontario	Sharpe and Davidson	1969	Re-issue
July 19/66	Mattice Lumber Co. Ltd., Mattice, Ontario	Sankney Township	1966	New
July 19/66	George W. Skidmore, Brower, Ontario	Blount and Laughton Townships	1967	New
Aug. 3/66	Feldman Timber Co. Ltd., Timmins, Ontario	Little Township	1969	Re-issue
Aug. 3/66	Howard-Bienvenu Inc., La Sarre, Quebec	Lamplugh and Harker Townships	1967	Re-issue
Aug. 3/66	Woollings Forest Products Ltd., Englehart, Ontario	Lee and Terry Townships	1969	Re-issue
Aug. 3/66	Woollings Forest Products Ltd., Englehart, Ontario	Cook Township	1969	Re-issue
Aug. 4/66	George R. Stein, Schutt, Ontario	Ashby Township	1971	Re-issue
Aug. 4/66	Oba River Timber Co. Ltd., P.O. Box 487, Hearst, Ontario	Hawkins Township	1969	New
Aug. 4/66	Garnet Yuke, Palmer Rapids, Ontario	Mayo and Ashby Townships	1971	Re-issue
Aug. 5/66	Earl J. Armstrong, Madoc, Ontario	Lake Township	1971	Re-issue
Aug. 5/66	Victor Roy, Britt, Ontario	Mowat Township	1969	Re-issue
Aug. 5/66	A. G. Wilson, Boulter, Ontario	Townships 137 and 138	1969	Re-issue

Table 28 (Continued)

DATE	LICENSEE	LOCATION	Expiry March 31st	Type of Transaction
Aug. 9/66	Ranger Logging Ltd., 99 Pine Street, Apt. 500, Sault Ste. Marie, Ontario	Township 175	1969	New
Aug. 12/66	Dan Vallieres, R.R. #3, Madoc, Ontario	Sherborne Township	1969	Re-issue
Aug. 12/66	Anthony Forgione, Box 716, Bracebridge, Ontario	Ridout Township	1970	New
Aug. 12/66	Charles Le Ray, R.R. #1, Keewatin, Ontario	Gidley and Pellat Townships	1968	Re-issue
Aug. 12/66	Nym Lake Timber Co., Roadside Lodge, Atikokan, Ontario	Unsurveyed Territory, Rainy River District	1968	New
Aug. 16/66	H. Kutschke & Sons Ltd., R.R. #1, Pembroke, Ontario	Rolph and Wylie Townships	1970	New
Aug. 18/66	G. L. McKnight, Lee Valley, Ontario	McKinnon Township	1969	Re-issue
Aug. 19/66	Canadian Splint & Lumber Corporation, Limited, Pembroke, Ontario	Cameron, Edgar, Bronson Townships, etc.	1972	Re-issue
Aug. 19/66	Whitman Lumber Co. Ltd., P.O. Box 808, North Bay, Ontario	Notman Township	1967	New
Aug. 19/66	Hector Clouthier, R.R. #6, Pembroke, Ontario	Head Township	1969	Re-issue
Aug. 19/66	Cochrane Enterprises Ltd., Cochrane, Ontario	Heighington and Raven Townships	1967	New
Aug. 23/66	Henry Selin Forest Products Limited, Hearst, Ontario	McFarlan and Verdun Townships	1967	New
Sept. 2/66	Isidore Carre, River Valley, Ontario	Janes Township	1967	New
Sept. 7/66	Alex Jaman, 225 Clark Street, Atikokan, Ontario	Schwenger Township	1967	New
Sept. 12/66	Gillies Bros. and Co. Ltd., Braeside, Ontario	Fitzgerald Township	1969	New
Sept. 13/66	Weyerhaeuser Canada Ltd., P.O. Box 730, Sault Ste. Marie, Ontario	Devine Township	1969	Re-issue
Sept. 13/66	Herb Shaw & Sons Ltd., 137 McKay Street, Pembroke, Ontario	Fitzgerald and White Townships	1967	Re-issue
Sept. 14/66	Fielding Lumber Co. Ltd., R.R. #1, Copper Cliff, Ontario	Struthers Township	1971	Re-issue
Sept. 14/66	Herb Shaw & Sons Ltd., 137 McKay Street, Pembroke, Ontario	White, Niven, Deacon Townships, etc.	1969	New
Sept. 22/66	Maurice Lecours, Hearst, Ontario	Bannerman Township	1967	New
Sept. 26/66	William Milne & Sons Ltd., P.O. Box 159, Temagami, Ontario	Joan and Cynthia Townships	1969	New
Sept. 27/66	Isabelle Brothers, Opasatika, Ontario	Sankey Township	1969	Re-issue
Oct. 3/66	Vic Pearson & Sons Ltd.,	Farrington Township and Unsurveyed Territory, Rainy River District	1968	New

	Fort Frances, Ontario			
Oct. 3/66	Harvey J. McFarland, Picton, Ontario	Cashel Township	1971	New
Oct. 3/66	J. D. Levesque, Box 460, Hearst, Ontario	Shannon Township	1969	New
Oct. 11/66	Chapleau Lumber Co. Ltd., Chapleau, Ontario	Buckland and Ramsden Townships	1969	New
Oct. 11/66	A. & L. Lafreniere Lumber Ltd., Chapleau, Ontario	Marshall Township	1967	New
Oct. 12/66	Oscar Styffe Ltd., Port Arthur, Ontario	Factor and Barrett Townships	1971	Re-issue
Oct. 12/66	Trilake Timber Co. Ltd., Box 361, Kenora, Ontario	Unsurveyed Territory, Kenora District	1967	New
Oct. 25/66	Emery Turcotte, Gobden, Ontario	Petawawa and McKay Townships	1967	Re-issue
Oct. 25/66	Whitman Lumber Co. Ltd., Box 808, North Bay, Ontario	Mulock Township	1969	New
Oct. 26/66	John B. Smith & Sons Ltd., 53 Strachan Avenue, Toronto 3, Ontario	Patterson Township	1969	Re-issue
Oct. 28/66	Allan Lahaie & Son, Alban, Ontario	Hagar, Handrie, Cosby Townships, etc.	1970	New
Oct. 31/66	Lakewoods Timber Ltd., Tweed, Ontario	Bower, Preston, Murchison Townships, etc.	1976	Re-issue
Oct. 31/66	Devlin Timber Co. Ltd., 59 Drewry Drive, Kenora, Ontario	Gidley, Broderick, Malachi Townships, etc.	1969	New
Nov. 1/66	A. Lecours & Sons Ltd., Hearst, Ontario	Hushimi and Rogers Townships	1968	New
Nov. 1/66	The Frawley Lake Lumber Co. Ltd., Box 83, Callander, Ontario	Flett and Hammel Townships	1968	New
Nov. 3/66	Peter Thomson & Sons Ltd., Alliston, Ontario	Bethune, Finlayson, Butt Townships, etc.	1975	New
Nov. 3/66	Lakewoods Timber Ltd., Tweed, Ontario	Olrig and Phelps Township	1969	Re-issue
Nov. 3/66	Emo Forest Products Ltd., Emo, Ontario	Rowe Township	1975	Re-issue
Nov. 7/66	Emo Forest Products Ltd., Emo, Ontario	Menary Township	1971	New
Nov. 7/66	John B. Smith & Sons Ltd., 53 Strachan Avenue, Toronto 3, Ontario	Fell Township	1969	Re-issue
Nov. 7/66	Feldman Timber (Matheson), P.O. Box 440, Timmins, Ontario	Thackeray, Garrison and Elliott Townships	1967	New
Nov. 7/66	Patrick Robillard, Box 539 Red Lake, Ontario	Unsurveyed Territory, Kenora District	1969	New
Nov. 7/66	Alex K. Sawicki, 603 Nelson Street, Fort Frances, Ontario	Watten and Halkirk Townships	1971	Re-issue
Nov. 7/66	William MacBrien, Mattawa, Ontario	Lauder Township	1968	Re-issue
Nov. 8/66	Goulard Lumber (1962) Ltd., Box 730, Sturgeon Falls, Ontario	McConnell and Mackelcan Townships	1974	New
Nov. 8/66	Cockburn Lumber Ltd., Capreol, Ontario	Selkirk Township	1969	New

Table 28 (Continued)

DATE	LICENSEE	LOCATION	Expiry March 31st	Type of Transaction
Nov. 10/66	Hinde and Dauch Ltd., 2240 Sun Life Building, Montreal, Quebec	Cashel, Grimstone, Ashby Townships, etc.	1971	New
Nov. 12/66	Weldwood of Canada Ltd., P.O. Box 247, Islington, Ontario	Livingstone Township	1971	New
Nov. 17/66	Charles Shier & Sons, Hunta, Ontario	Clute Township	1969	Re-issue
Nov. 17/66	Northern Forest Products Ltd., P.O. Box 990, Port Arthur, Ontario	Forbes Township	1968	New
Nov. 17/66	Elmer Alldred, Minden, Ontario	Sherborne and Stanhope Townships	1969	Re-issue
Nov. 17/66	Kenneth McDougall, Red Lake, Ontario	Heyson Township	1968	Re-issue
Nov. 17/66	Leonard A. Wilson, 159 Faren Street, New Liskeard, Ontario	McGriffin Township	1969	New
Nov. 17/66	Colenso Lumber Co. Ltd., Red Lake Road, Ontario	Colenso Township	1971	Re-issue
Nov. 17/66	Kerr Addison Mines Ltd., Virginiatown, Ontario	Ossian, Katrine, McVittie Township	1969	Re-issue
Nov. 17/66	Woollings Forest Products Ltd., Englehart, Ontario	Clifford Township	1967	New
Nov. 17/66	Devlin Timber Co. Ltd., 59 Drewry Drive, Kenora, Ontario	Gundy and Broderick Townships	1970	New
Nov. 17/66	Edward Harvey Wilson, Jones, Ontario	Unsurveyed Territory, Kenora District	1969	New
Nov. 17/66	Bishop Timber Co. Ltd., Box 130, Spanish, Ontario	Harrow Township	1968	Re-issue
Nov. 17/66	Central Canada Forest Products Ltd., P.O. Box 417, Port Arthur, Ontario	Dorothea, Sandra, Irwin Townships, etc.	1968	Re-issue
Nov. 18/66	Mattice Lumber Co. Ltd., Mattice, Ontario	Fleck Township	1969	New
Nov. 18/66	Arrow Timber Co. Ltd., Box 1012, Hearst, Ontario	Irish Township	1968	New
Nov. 18/66	W. G. Tough, South River, Ontario	Lount Township	1969	New
Nov. 18/66	G. K. Stringer Ltd., 251 Moore Street, South Porcupine, Ontario	Carnegie, Prosser, Kidd Townships, etc.	1973	Re-issue
Nov. 22/66	Martin Bros. Lumber Co. Ltd., Harcourt, Ontario	Bruton Township	1971	Re-issue
Nov. 28/66	Rene Fabris, P.O. Box 327, Elliot Lake, Ontario	Esten Township	1968	Re-issue
Nov. 30/66	Cochrane Enterprises Ltd., Cochrane, Ontario	Heighington Township	1967	New
Nov. 30/66	Kormak Lumber Co. Ltd., 6 Dufferin Street, Sudbury, Ontario	Halsey, Nimitz, 12E Townships, etc.	1970	Re-issue
Nov. 30/66	Metal Mines Ltd., Suite 1600, 100 Adelaide Street West, Toronto 1, Ontario	Unsurveyed Territory, Kenora District	1971	New

	Alban, Ontario		1968	New
Nov. 30/66	Vernon Armstrong, 601 Third Street West, Fort Frances, Ontario	Unsurveyed Territory, Rainy River District	1971	New
Nov. 30/66	Pearson Forest Products Ltd., Box 219, Fort Frances, Ontario	Unsurveyed Territory, Rainy River District	1969	Re-issue
Dec. 7/66	Paul Csuzdi, 925 Kildonan Drive, Winnipeg, Manitoba	Pelican Township	1971	New
Dec. 7/66	Remus Brothers, Pembroke, Ontario	Master, McKay, Petawawa Townships, etc.	1969	Re-issue
Dec. 7/66	Abitibi Paper Co. Ltd., 408 University Avenue, Toronto, Ontario	Traill, Bradburn, Robb Townships, etc.	1988	Re-issue
Dec. 7/66	St. Lawrence Corporation Ltd., Sun Life Building, Montreal 2, Quebec	Unsurveyed Territory, Thunder Bay District	1984	New
Dec. 14/66	Kent Brothers Ltd., R.R. #1, Sundridge, Ontario	Butt Township	1969	Re-issue
Dec. 14/66	Jamar Plywood Ltd., P.O. Box 998, Kirkland Lake, Ontario	Robb and Jamieson Townships	1967	New
Dec. 21/66	Rogerson Lumber Co. Ltd., Port Loring, Ontario	Wilson and Brown Townships	1972	Re-issue
Dec. 21/66	W. T. Ankney, Box 2095, Dryden, Ontario	Unsurveyed Territory, Thunder Bay District	1967	New
Dec. 29/66	Sawyer-Stoll Lumber Co. of Canada Limited, Kaladar, Ontario	Lavant Township	1975	Re-issue
Dec. 29/66	Arthur Gagnon, R.R. #1, Kenora, Ontario	Umbach Township and Unsurveyed Territory, Kenora District	1968	New
Dec. 29/66	John B. Smith & Sons Ltd., 53 Strachan Avenue, Toronto 3, Ontario	McCallum Township	1969	Re-issue
Dec. 29/66	Weyerhaeuser Canada Ltd., Sault Ste. Marie, Ontario	Townships 28, 29, 30, Range 19, etc.	1975	Re-issue
Dec. 29/66	Weyerhaeuser Canada Ltd., Sault Ste. Marie, Ontario	Papineau, Boyd, Lister Townships, etc.	1968	New
Dec. 30/66	Allan Lahaie & Son, Alban, Ontario	Hoskin Township	1969	New
Dec. 30/66	George C. B. Smith, Box 121, Fort Frances, Ontario	Unsurveyed Territory, Rainy River District	1969	Re-issue
Dec. 30/66	Gerald Junkin, Bocaygeon, Ontario	Galway Township	1969	Re-issue
Dec. 30/66	Hogan Lake Timber Ltd., Pembroke, Ontario	Biggar, Osler, Lister Townships, etc.	1974	Re-issue
Jan. 5/67	Hogan Lake Timber Ltd., Pembroke, Ontario	McLaughlin and Bower Townships	1968	New
Jan. 10/67	H. P. Lamothe Lumber Co. Ltd., 347 Sherbrooke Street, North Bay, Ontario	Carlyle Township	1969	Re-issue
Jan. 23/67	Pembroke Lumber Co. Ltd., Box 201, Pembroke, Ontario	White, Edgar and Fitzgerald Townships	1969	Re-issue
Jan. 23/67	Northern Forest Products Ltd., P.O. Box 990, Port Arthur, Ontario	Pardee Township	1968	New

Table 28 (Continued)

DATE	LICENSEE	LOCATION	Expiry March 31st	Type of Transaction
Jan. 23/67	Northern Forest Products Ltd., Box 990, Port Arthur, Ontario	Unsurveyed Territory, Thunder Bay District	1967	New
Jan. 23/67	Albert Kapush Contracting Ltd., R.R. #2, Port Arthur, Ontario	Unsurveyed Territory, Rainy River District	1969	New
Jan. 23/67	Boyes Brothers, Vankoughnet, Ontario	Oakley Township	1969	New
Jan. 30/67	Madsen Red Lake Gold Mines Ltd., Madsen, Ontario	Ranger, Shaver, Bateman Townships, etc.	1969	Re-issue
Jan. 30/67	William G. Gaudry, R.R. #1, Sleeman, Ontario	Senn Township	1969	Re-issue
Jan. 30/67	The Trout Creek Lumber Co. Ltd., Powassan, Ontario	Patterson and Gurd Township	1969	New
Jan. 30/67	Nym Lake Timber Co., Box 760, Atikokan, Ontario	Unsurveyed Territory, Rainy River District	1969	New
Jan. 30/67	Frank X. Landry, Box 27, Atikokan, Ontario	Unsurveyed Territory, Rainy River District	1969	New
Jan. 30/67	Frederick Alexander Fleming, Barryvale, Ontario	Blithfield Township	1969	Re-issue
Jan. 30/67	Stewart Bros., R.R. #3, Arnprior, Ontario	Darling Township	1975	Re-issue
Feb. 7/67	Cochrane Enterprises Ltd., Cochrane, Ontario	Freele, Challies, Findlay Townships, etc.	1967	New
Feb. 7/67	Sawyer-Stoll Lumber Co. of Canada Ltd., Kaladar, Ontario	Effingham, Cashel, Carlow Townships, etc.	1975	New
Feb. 28/67	Great Lakes Lumber and Shipping Ltd., P.O. Box 417, Port Arthur, Ontario	Unsurveyed Territory, Thunder Bay District	1970	Re-issue
Feb. 28/67	Frank H. Spence Ltd., Port Arthur, Ontario	Pyramid Township	1971	Re-issue
March 16/67	Shoosplin - Woods Ltd., Barry's Bay, Ontario	Clancy, Dickens, Guthrie Townships, etc.	1973	Re-issue
March 22/67	David Dick, R.R. #1, Hyndford, Ontario	Sebastopol, Grattan, Griffith Townships, etc.	1972	Re-issue
March 28/67	Emo Forest Products Ltd., Emo, Ontario	Senn, Fleming and Kingsford Townships, etc.	1975	Re-issue